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# MAINTAINING OUR INTERNATIONAL COMPETITIVENESS: THE IMPORTANCE OF STANDARDS AND CONFORMITY ASSESSMENT ON INDUSTRY

Y 4.SCI 2:104/12

Maintaining Our International Compe...

## HEARING

BEFORE THE

SUBCOMMITTEE ON TECHNOLOGY

OF THE

COMMITTEE ON SCIENCE

U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTH CONGRESS

FIRST SESSION

JUNE 29, 1995

[No. 12]

Printed for the use of the Committee on Science

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*Ranking Minority Member
**Vice Chairman

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# MAINTAINING OUR INTERNATIONAL COMPETITIVENESS: THE IMPORTANCE OF STANDARDS AND CONFORMITY ASSESSMENT ON INDUSTRY

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**THURSDAY, JUNE 29, 1995**

House of Representatives,
Committee on Science,
Subcommittee on Technology,
*Washington, DC.*

The subcommittee met at 9:30 a.m. in room 2325 of the Rayburn House Office Building, the Honorable Constance A. Morella (chairman of the subcommittee) presiding.

Mrs. Morella. The hearing will now come to order.

I want to thank you all for being so very patient. This has somehow become very typical around here. One doesn't know from one five minutes to the next whether or not we will be running over to vote or not.

We are setting a record I think certainly during this period, which I think had once been set in 1978, for the number of hours continuously where we had been voting.

As you probably have heard and certainly if you watched C-Span at any point if you don't sleep well at night and turn it on at 4 in the morning there we were or 2 in the morning, and we are still in session since 10 o'clock yesterday morning.

So if our eyes close just know we are still listening. If we don't get to all the questions, I hope you will allow us to be able to submit questions to you for your response.

We are convening today to discuss improvements in Federal and State standards and in conformity assessment.

I look forward to hearing from the very distinguished panelists regarding this subject, and again I reiterate my thanks to you.

Standards play a crucial part in all facets of our lives. Standards are the reason it is possible to buy film from Japan and use the film in an American camera. They allow you to purchase any computer disc, regardless of the brand, and use it in your hard drive.

Under the direction of the 102nd Congress, the National Research Council released a study titled, "Standards, Conformity Assessment, and Trade in the 21st Century," and that came out in March. The study made 10 recommendations, which I look forward to addressing more closely in today's hearing.

The United States, unlike most other countries, has a very decentralized voluntary consensus standards system. This unique consensus-based voluntary system has served us well for over a century. It is a system that has largely contributed to United States competitiveness, health, public welfare, and safety.

The key to our future international competitiveness lies in our ability to develop standards which match the speed of the rapidly changing technology of the marketplace. This challenge is one that we must meet head on.

While we are aware that the standard role of the United States Government is extremely different than that of our trading partners, and that is a problem, Federal agencies are major participants in the U.S. standards system. The challenge is to integrate the public and private sector resources in the voluntary standards system and to do it in a way that protects the industry-led lead and protects the public good.

I have looked at the council's report which included several recommendations involving the National Institute of Standards and Technology.

During the full committee markup, which was until very late last night, of the American Technology Advancement Act, which authorizes NIST for fiscal year 1997, I offered an amendment which includes some of the recommendations in the report which affects NIST. I am pleased that that amendment unanimously passed the committee, even though we didn't have this hearing before I had offered the amendment because of the tight timing of the markups.

I am looking forward to examining the relationship between the public and private sector in the standards-setting and conformity assessment process. I also look forward to hearing comments regarding the recommendations of this long awaited report.

We are happy to have on our first panel of experts Mr. Gary Hufbauer, representing the National Research Council; Dr. Belinda Collins from NIST; Ms. Amy Marasco from the American National Institute of Standards and Technology.

You may want, Dr. Hufbauer, to introduce the person you have with you, who he is, for the record.

[The prepared opening statement of Mrs. Morella follows:]

# OPENING STATEMENT
# CHAIRWOMAN CONSTANCE A. MORELLA

SUBCOMMITTEE ON TECHNOLOGY
HOUSE COMMITTEE ON SCIENCE

JUNE 29, 1995

We are convening today to discuss improvements in federal and state standards and in conformity assessment. I look forward to hearing from the very distinguished panelists regarding this important subject and I thank you all for being here.

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I have carefully reviewed the Council's report which included several recommendations involving the National Institute of Standards and Technology. During the Full Committee mark up last night of the American Technology Advancement Act, which authorized NIST for Fiscal Year 1996, I offered an amendment which includes some of the recommendations in the report which affect NIST. I am pleased that the amendment unanimously passed the committee.

I am looking forward to examining the relationship between the public and private sector in the standards-setting and conformity assessment process. I also look forward to hearing comments regarding the recommendations of this long awaited report.

We are happy to have on our first panel of experts Mr. Gary Hafbauer, representing the National Research Council; Ms. Belinda Collins from NIST, and Ms. Amy Marasco, from the American National Institute of Standards and Technology. Testifying on the second panel today are representatives from the private industry including: Mr. Stephen Oksala from Unisys; Mr. Ritterbusch representing Caterpillar, Inc.; Mr. Louis Dixon of Ford Motor Company; Mr. Walter Poggi President of Retlif Testing Laboratories and also representing ACIL; and Mr. Rod Lee from Lithonia Lighting.

Welcome to these distinguished panelists. I now recognize any other members who wish to give an opening statement.

Dr. HUFBAUER. John Godfrey with the National Research Council.

Mrs. MORELLA. Thank you, Mr. Godfrey. Welcome you also.

Testifying on the second panel, we are going to hear from representatives from private industry. They are going to include Mr. Stephen Oksala from Unisys; Mr. Ritterbusch, representing Caterpillar, Inc.; Dr. Louis Dixon of Ford Motor Company; Mr. Walter Poggi, President of Retlif Testing Laboratories and also representing ACIL; and Mr. Rod Lee from Lithonia Lighting.

So welcome all these distinguished panelists.

Now I would like to recognize my ranking member, Mr. Tanner.

Mr. TANNER. Thank you, Madam Chairman.

I want to welcome all of you here and apologize for the somewhat sparse turnout of our subcommittee.

As you may know, we went into session yesterday morning at 10 and adjourned just a few minutes ago, and on top of that, we had a markup that lasted a little over 12 hours in the full committee yesterday.

Unfortunately, I think and sadly we did not get to receive your testimony before some action was taken in the markup last night.

Nonetheless, we appreciate you being here.

It is my hope that we can use this record as we continue to try to press our ideas about where we need to go in this country not only with respect to the internal programs of NIST but also with respect to the external programs, ATP, MEP and others.

We will look forward to your testimony today and hopefully we will be able to implement some of your recommendations as action continues and we get to the point where if we can get the Rules Committee to make any amendments that may be forth coming in order.

Thank you very much for being here.

Mrs. MORELLA. Thank you, Mr. Tanner.

I recognize Ms. Lofgren for an opening statement.

Ms. LOFGREN. Thank you, Madam Chairman.

I did not have a chance in this long night to prepare an opening statement.

I just would like to thank the witnesses, obviously the first panel, and especially the second panel, because I know that those from the private sector will take the time and go to the expense to come forward and give testimony deserves special thanks. We are trying to improve our country.

I am a newcomer to the House of Representatives. I have been here just shy of seven months, and so I look forward to being an old hand.

I am disconcerted that we are getting the testimony subsequent to the bill that should have been the product of the testimony. I certainly recognize the chairwoman's explanation as to the timing, and it has been chaotic, but to that extent I apologize to the witnesses because the vehicle has left the station, and I look forward to reading the written testimony and if I leave the room please forgive me. I hope to have a shower before we get back at 11:30.

Mrs. MORELLA. We will be able to hear your responses also to the amendment that had been offered and to the report.

May I ask the witnesses if they would speak for approximately two minutes so that we then have an opportunity to ask some questions and then get on with the second panel, too.

So we will start off. Since you are involved with the report, Dr. Hufbauer will be first.

## STATEMENT OF DR. GARY C. HUFBAUER, NATIONAL RESEARCH COUNCIL, SENIOR FELLOW, INSTITUTE FOR INTERNATIONAL ECONOMICS, WASHINGTON, DC, ACCOMPANIED BY JOHN GODFREY

Dr. HUFBAUER. Thank you very much for this opportunity to speak, especially in the time of duress and sleep deprivation on your part.

I served as chairman of the committee, as you noted, under the auspices of the National Research Council which is part of the National Academy of Sciences.

Another member of the committee, as you noted, Gerald Ritterbusch with Caterpillar, is here and will be on the second panel, and John Godfrey, my colleague, was a staff member of the National Research Council during the preparation of the report.

This hearing is timely, and I guess I only appreciate that some of the recommendations have already found their way into possible legislation, so I am very gratified by that personally.

Our committee had many recommendations, as you noted. Let me just highlight two areas.

One, we did recommend that the U.S. and European Union proceed with negotiations for mutual recognition of systems for testing and certifying products and manufacturing processes.

Not mutual recognition of standards—let me be quite clear—but mutual recognition of these processes of testing and certification.

That has been undertaken by the Department of Commerce with, it seems to me, new energy, and the U.S. Trade Representative, and we would encourage that process to go forward.

We think it is critical for access to European markets, and that will be the model for other areas, and I will note the Asia-Pacific cooperation area is the second big area for this kind of effort.

Another member of the National Research Council, John Wilson, is now at Sapporo working on these issues, and he may like to submit a statement when he returns from Sapporo.

The second area which I might briefly note is that the committee came to the conclusion that our standards setting system—which is basically a voluntary private system for most standards in this country including the defense area—that system works well.

The problem in this country is with the system for measuring and certifying conformity to standards, back to the conformity assessment issue, and here we think there is a great deal of unnecessary duplication horizontally across the States and localities, in the Federal Government, and so forth.

Our recommendations give a lead role or would assign a lead rule to NIST, and if I understood correctly what you said, perhaps some of those will be embodied in legislation.

Let me conclude with highlighting the two areas where we thought NIST could be very active and very constructive.

One is to lead the charge to phase out federally operated conformity assessment activities by the year 2000 and replace them with private service conformity assessment activities which are, in turn, recognized by NIST.

Mr. Dixon of Ford will be telling you later that we should have a different acronym. Our acronym should be NISTRS for the NIST recognition system.

I won't go into all the details, but there is recognition up here, accreditation down here, testing down here, roughly speaking, and NIST should be right at the top of the system as a recognizer of an accredit course.

Very importantly we think that could make a lot of difference and reduce cost over a period of time.

Secondly, we would like to see NIST work with State and local governments to eliminate this duplicative accreditation system which is really quite elaborate and quite costly and defeats the notion of a product tested once to a certain standard should be able to be sold everywhere. That is the simple goal that we endorse everywhere in the United States and ultimately everywhere in the world.

So we want to give NIST a big role in this: first of all, discussion phase and then we recommend at the end of 10 years preemption phase but we think there would not be much preemption if it was not necessarily headed for a national simplification of the conformity assessment systems.

Let me finally say that I know that my colleague, Dr. Collins from NIST, is going to give you testimony which is somewhat deferential on the potential NIST role.

I would urge you to embolden NIST to take on the assignment we have urged and not allow them to be too shy.

Thank you.

[The prepared statement of Dr. Hufbauer follows:]

# STANDARDS, CONFORMITY ASSESSMENT, AND TRADE

Statement of

Gary C. Hufbauer
Chairman of the International Standards, Conformity Assessment,
and U.S. Trade Policy Project Committee
Board on Science, Technology, and Economic Policy
National Research Council
and
Reginald Jones Senior Fellow
Institute for International Economics

before the
Subcommittee on Technology
Committee on Science
U.S. House of Representatives

June 29, 1995

Thank you for the opportunity to speak. My name is Gary Hufbauer. I served as chairman of the International Standards, Conformity Assessment, and U.S. Trade Policy Project Committee of the National Research Council (NRC). Another member of that committee, Mr. Gerald Ritterbusch, Manager of Product Safety and Environmental Control with Caterpillar, Inc., is on the second panel this morning. Also with me is Mr. John Godfrey, one of the National Research Council staff who supported the committee.

We are here today to present the findings and recommendations of the new NRC report, *Standards, Conformity Assessment, and Trade: Into the 21st Century*. This report is the result of a request by your subcommittee in the American Technology Preeminence Act of 1991 (P.L. 102-245). The study began in the fall of 1993, with funding from the National Institute of Standards and Technology, and was conducted under the auspices of the NRC's Board on Science, Technology, and Economic Policy, which is chaired by A. Michael Spence, Dean of the Graduate School of Business, Stanford University.

This hearing is very timely. As the committee recommended, negotiations are now in progress between the United States and the European Union to promote mutual recognition of national systems for testing and certifying products and manufacturing processes against standards. Similar negotiations are about to begin within the Asia Pacific Economic Cooperation (APEC) forum. Mutual recognition agreements present a clear opportunity for significant expansion of international trade, and the United States should seek successful conclusion of these agreements as soon as possible. The United States should also move aggressively to eliminate standards and conformity assessment-related barriers to U.S. exports in world markets. These actions should be an integral component of U.S. trade policy over the next decade.

The report also addresses an extremely important set of goals for national economic policy. Although the report concludes that standards development within the United States generally works well and meets national needs, urgent reform is needed in U.S. systems for measuring and certifying conformity to standards. The U.S. conformity assessment system should be strengthened by removing ineffective and duplicative rules and regulations that govern testing, certification, and laboratory accreditation. This will come about, in part, through changes in the mandate of the National Institute of Standards and Technology (NIST).

Specifically, our report recommends that Congress provide NIST with a statutory mandate to implement a government-wide policy of phasing out all federally-operated conformity assessment activities by the year 2000 and replacing them with private-sector services recognized by NIST. In addition, NIST should work with state and local governments to resolve the severe problems of inefficiency and redundancy at those levels. After ten years, remaining duplication in state and local conformity assessment regulations should be eliminated through preemption by federal regulatory agencies.

The remainder of my statement reflects the Executive Summary of the NRC report. I will be happy to answer questions.

## Background of the Report

The United States has made significant progress over the past two decades to foster a competitive economic environment for workers and firms. Initiatives by both industry and government to restructure the nation's productive capacities and promote microeconomic efficiencies have resulted in many benefits. The United States has led the world in removing regulatory controls in the transportation, energy, and telecommunication sectors. Continued progress is needed, however, to achieve higher levels of economic growth. This progress will come, in part, through aggressive efforts to remove costly, inefficient, and unnecessary barriers to production of goods and services embedded in the U.S. national standards and conformity assessment system.

The NRC report offers a comprehensive analysis of the relationships between production, standards, and conformity assessment. It provides recommendations to support both domestic policy reform and the continued success of U.S. goods and services in global markets. Our report finds that in most instances, the U.S. standards development system serves the national interest well. However, we also found evidence that our domestic procedures for assessing conformity of products and processes to standards require urgent improvement.

At the same time, our report emphasizes the strategic importance of standards and conformity assessment systems in supporting national trade objectives. In order to address the new international dynamics of global trade, an innovative U.S. trade policy to meet challenges of the post-Uruguay Round trading environment is required. U.S. policies should aggressively seek to reduce standards-related barriers to trade. This involves both unilateral action through U.S. trade law and international negotiations aimed at mutual recognition by governments of conformity assessment systems.

The following summarizes our conclusions and recommendations, which are outlined in detail in the full report. Some of the recommendations are already being implemented, in part, by the concerned federal agencies.

## Conformity Assessment

The U.S. conformity assessment system has become increasingly complex, costly, and burdensome to national welfare. Unnecessary duplication and complexity at the federal, state, and local levels result in high costs for U.S. manufacturers, procurement agencies, testing laboratories, product certifiers, and consumers.

Government agencies should retain oversight responsibility for critical regulatory and procurement standards in areas of public health, safety, environment, and national security. The assessment of product conformity to those standards, however, is performed most efficiently and effectively by the private sector. Government should act only in an oversight capacity. The government should evaluate and recognize private-sector organizations that are competent to accredit testing laboratories, product certifiers, and quality system registrars.

- **RECOMMENDATION 1:** Congress should provide the National Institute of Standards and Technology (NIST) with a statutory mandate to implement a government-wide policy of phasing out federally operated conformity assessment activities.

  NIST should develop and implement a National Conformity Assessment System Recognition (NCASR) program. This program should recognize accreditors of (a) testing laboratories, (b) product certifiers, and (c) quality system registrars. By the year 2000, the government should rely on private-sector conformity assessment services recognized as competent by NIST.

- **RECOMMENDATION 2:** NIST should develop, within one year, a ten-year strategic plan to eliminate duplication in state and local criteria for accrediting testing laboratories and product certifiers. NIST should lead efforts to build a network of mutual recognition agreements among federal, state, and local authorities.

After 10 years, the Secretary of Commerce should work with federal regulatory agencies to eliminate remaining duplication through preemption of state and local conformity assessment regulation.

## Standards Development

The U.S. standards development system serves the national interest well. In most cases, it supports efficient and timely development of product and process standards that meet economic and public interests. Federal government use of the standards developed by private standards organizations in regulation and public procurement has many benefits. These include lowering the costs to taxpayers and eliminating the burdens on private firms from meeting duplicative standards in both government and private markets. Although not every public standard can be developed through private-sector processes, government should rely on private activities in all but the most vital cases involving protection of public health, safety, environment, and national security.

Current efforts by the U.S. government to leverage the strengths of the private U.S. standards development system, as outlined in the Office of Management and Budget (OMB) Circular A-119, "Federal Participation in the Development and Use of Voluntary Standards," are inadequate. Effective, long-term public-private cooperation in developing and using standards requires a clear division of responsibilities and effective information transfer between government and industry. Improved institutional mechanisms are needed to effect lasting change.

- **RECOMMENDATION 3:** Congress should enact legislation replacing OMB Circular A-119 with a statutory mandate for NIST as the lead U.S. agency for ensuring federal use of standards developed by private, consensus organizations to meet regulatory and procurement needs.

- **RECOMMENDATION 4**: The director of NIST should initiate formal negotiations toward a memorandum of understanding (MOU) between NIST and the American National Standards Institute (ANSI). The MOU should outline modes of cooperation and division of responsibility between (1) ANSI, as the organizer and accreditor of the U.S. voluntary consensus standards system and the U.S. representative to international, non-treaty standard-setting organizations and (2) NIST, as the coordinator of federal use of consensus standards and recognizing authority for federal use of private conformity assessment services. NIST should not be precluded from negotiating MOUs with other national standards organizations.

  In addition, all federal regulatory and procurement agencies should become dues-paying members of ANSI. Dues will support government's fair share of ANSI's infrastructure expenses.

## International Trade

Expansion of global trade is increasingly important to domestic economic growth, productivity, and high-wage employment opportunities in the United States. The reduction of barriers to international commerce and aggressive promotion of U.S. exports must continue to be the fundamental objectives of a post-Uruguay Round trade strategy. At the multilateral level, the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) achieved significant progress in reducing barriers related to discriminatory standards and national product testing and certification systems.

There is evidence to indicate that the growing complexity of conformity assessment systems in many nations threatens, however, to undermine future global trade expansion. U.S. exporters face high costs in gaining product acceptance in multiple export markets. Many nations impose duplicative, discriminatory requirements for product testing, certification, and quality system registration. The European Union's (EU's) mechanisms for approving regulated products, in particular, continue to pose serious barriers to expanded export opportunities for U.S. firms. Clearly, the severity of these obstacles varies by industry sector. From a national perspective, it is important, however, to achieve a rapid, negotiated removal of EU barriers. This will serve both to expand trade opportunities with our European partners, and to help promote the success of similar negotiations between the United States and other trading partners, especially those in the emerging nations of the Asia Pacific Economic Cooperation (APEC) forum.

Agreements between governments to recognize national conformity assessment mechanisms have a great potential to facilitate trade. A network of global mutual recognition agreements (MRAs) would enable manufacturers to test products once and obtain certification and acceptance in all national markets. At the regional level, for example, a successful conclusion to discussions within the APEC forum on an MRA would provide significant new opportunities for U.S. trade expansion in rapidly growing markets of Asia.

- **RECOMMENDATION 5:** The Office of the U.S. Trade Representative (USTR) should continue ongoing mutual recognition agreement negotiations with the European Union. The USTR should also expand efforts to negotiate MRAs with other U.S. trading partners in markets and product sectors that represent significant U.S. export opportunities. Priority should be given to conclusion of MRAs on conformity assessment through the Asia Pacific Economic Cooperation forum.

As noted above, negotiations between the United States and the EU toward mutual recognition of conformity assessment mechanisms merit the continued high-level support of government, specifically the Office of the USTR. It is possible, however, that negotiations with Europe may not reach a timely or successful conclusion. Under these circumstances, failure by the Europeans to remove trade barriers in conformity assessment within a reasonable time period should lead to unilateral action by the United States, as authorized under our trade laws. Moreover, the USTR should use the full potential of targeted action on a unilateral basis under our laws, as appropriate, to remove barriers in other markets.

- **RECOMMENDATION 6:** The USTR should use its authority under Section 301 of the Trade Act of 1974 to self-initiate retaliatory actions against foreign trade practices involving discriminatory or unreasonable standards and conformity assessment criteria. In particular, if U.S.-EU negotiations do not succeed within two years in securing fair access for U.S. exporters to European conformity assessment mechanisms, the USTR should initiate retaliatory actions under Section 301.

Innovative export promotion programs, in combination with a systematic policy to lower trade barriers, have the potential for significant, long-term economic benefit. By providing technical assistance to countries in emerging markets as they construct modern standards and conformity assessment systems, the United States has a unique and valuable opportunity to facilitate future world trade.

- **RECOMMENDATION 7:** NIST should develop and fund a program to provide standards assistance in key emerging markets. The program should have four functions:

  (a) provide technical assistance, including training of host-country standards officials, in building institutional mechanisms to comply with the Agreement on Technical Barriers to Trade under the Uruguay Round of the GATT;

  (b) convey technical advice from U.S. industry, standards developers, testing and certification organizations, and government agencies to standards authorities in host countries;

  (c) assist U.S. private-sector organizations in organizing special delegations to conduct technical assistance programs, such as seminars and workshops; and

  (d) report to the export promotion agencies of the Department of Commerce (such as the U.S. and Foreign Commercial Service) and the USTR regarding standards and conformity assessment issues affecting U.S. exports.

### Addressing Future Challenges and Opportunities

The nation's ability to anticipate and respond to new developments in standards and conformity assessment will influence our future in many ways. There is the urgent need for increased federal data gathering and analysis on standards and conformity assessment. We require an ongoing capacity to analyze the economic effects of developments in domestic and international standards and conformity assessment systems. This new capacity would support improvements not only in our domestic systems, but also in our ability to monitor and anticipate international developments in key emerging areas such as environmental management standards.

In addition, wide dissemination of information to U.S. firms about standards and certification requirements in global markets is needed to improve prospects for future U.S. export expansion. Detailed and readily available information about international developments is especially important for our small and medium-size firms wishing to compete in global export markets.

- **RECOMMENDATION 8:** NIST should increase its resources for education and information dissemination to U.S. industry about standards and conformity assessment. NIST should develop programs focusing on product acceptance in domestic and foreign markets. These efforts should include both print and electronic information dissemination, as well as seminars, workshops, and other outreach efforts. Programs should be conducted by NIST staff or by private organizations with NIST cooperation and funding.

- **RECOMMENDATION 9:** NIST should establish a permanent analytical office with economics expertise to analyze emerging U.S. and international conformity assessment issues. The office should evaluate and quantify the cost to U.S. industry and consumers of duplicative conformity assessment requirements of federal, state, and local agencies. To support the work of the USTR and other federal agencies, including those involved in export promotion, it should also collect, analyze, and report data on the effects of foreign conformity assessment systems and regulations on U.S. trade.

- **RECOMMENDATION 10:** The USTR's post-Uruguay Round trade agenda, including work through the World Trade Organization, should include detailed analysis and monitoring of emerging environmental management system standards and their potential effects on U.S. exports. Technical assistance should be provided to USTR by NIST.

Mrs. MORELLA. Thank you. That was a good choice of words.

Ms. Marasco.

## STATEMENT OF MS. AMY A. MARASCO, VICE PRESIDENT AND GENERAL COUNSEL, AMERICAN NATIONAL STANDARDS INSTITUTE, NEW YORK, NY

Ms. MARASCO. Good morning.

My name is Amy Marasco, and I am the Vice President and General Counsel of the American National Standards Institute, Inc., usually referred to as ANSI.

ANSI is a federation made up of companies, standards developers and other professional, trade, technical, academic, and consumer organizations, together with some 30 government agencies, the established form for the U.S. voluntary standardization community.

ANSI ensures the integrity of the private sector system. It serves as the sole accreditor of standard developers and determines whether standards meet the necessary criteria to become American National Standards. It also represents the U.S. in the two major nontreaty international standards organizations, ISO and IEC.

For the past 76 years, ANSI has worked in public/private partnership with government agencies. Many agencies already adopt or refer to voluntary consensus standards in regulations or procurement requirements and many participate in the consensus standards development process itself. We believe both of these things should be encouraged.

Both public and private sectors benefit from each other's technical expertise.

Industry benefits from having to conform to only one set of standards both public and private, and the government benefits from using a more efficient and cost effective process.

The OMB Circular A–119 recognizes these benefits and when followed works very well. However, our concern is that the circular is often ignored, in part, because time and travel expenses of would-be government participants are not being authorized.

We believe that the OMB Circular A–119 needs Congressional backing to be fully effective and while we support the recommendation in the NRC report we note that it suggests a legislative mandate for NIST.

We believe the thrust of the OMB Circular should also be enacted with respect to the various Federal agencies and should not just remain on the level of policy for them.

The legislation should indicate that it is in the national interest for Federal employees to participate in the U.S. voluntary consensus standards process and for Federal agencies to adopt by reference consensus standards whenever it is feasible and practicable.

We believe a lot of these same considerations are also true in connection with determining conformity to government requirements and regulations.

We agree with the NRC report's recommendation that Dr. Hufbauer has just described and we agree that the government should use accredited private sector conformity assessment processes that are accredited by a government recognized accreditor.

We believe this will reduce costs to the government and with mutual recognition agreements among Federal, State and local authorities will eliminate some of the redundant duplicative testing currently being imposed on our companies who want to sell across local and State lines.

The goal would be one test against one set of requirements to be able to sell nationwide.

We are certainly not suggesting that the government agencies abdicate all of their responsibilities. However, through partnering in connection with the development of standards and measuring conformity to them, government can better leverage the strength of the private sector processes and system. This should improve the efficiency of the process, save taxpayer money, and enhance global competitiveness by reducing layering and unnecessary duplication.

ANSI has 30 government agencies who already are members and participate in its governance body including on ANSI's board of directors.

Currently government agencies contribute less than one-fifth of one percent of ANSI's total budget. While we recognize today's government budget constraint ANSI not surprisingly supports the NRC recommendation that government agencies who are and who will benefit from the private sector processes support some of the infrastructure cost by becoming dues paying members of ANSI.

ANSI also agrees with the recommendation that the USTR continue to negotiate mutual recognition agreements with U.S. trading partners. Not only do our companies face duplicative regulatory requirements and conformity assessment testing here in the United States, they face it abroad, sometimes intentionally set up as trade barriers. The reality of the global marketplace is here, and yet there is not one global playing field.

Conformity assessment requirements can never be completely eliminated, but nations have to get to the point where one test in one place will suffice as the only ticket necessary to enter the global marketplace. ANSI is working at the international level with its counterparts in the private sector to obtain similar results, and in doing so, we are working closely with the USTR's office and with NIST.

ANSI is very pleased that particularly in the last few years there is a very positive relationship and interchange between it and NIST. We believe our roles complement each other and it has proven to be an effective link and focal point for coordination and the exchange of information between the public and the private sectors.

Thank you Madam Chairwoman.

Mrs. MORELLA: Thank you very much, Ms. Marasco. It was very informative.

[The prepared statement of Ms. Marasco follows:]

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**Testimony by Amy A. Marasco**
**Vice President and General Counsel,**
**American National Standards Institute**

**Hearing on**
**the National Research Council's Report**
***Standards, Conformity Assessment and Trade Into the 21st Century***

**"Maintaining Our International Competitiveness:**
**The Importance of Standards and Conformity Assessment On Industry"**

**before the**
**U.S. House of Representatives Committee on Science,**
**Subcommittee on Technology**

**June 29, 1995**

Good morning. My name is Amy Marasco and I am Vice President and General Counsel of the American National Standards Institute, Inc., which usually is referred to by its acronym, ANSI. I am testifying today in the place of Mr. Sergio Mazza, ANSI's President, who is participating in the meetings of the U.S.-Brazil and U.S.-Argentina Business Development Councils in Denver, Colorado. These Councils were established by the U.S. Department of Commerce and the Government of Argentina Ministry of Economy and Public Works and Services and the Federative Republic of Brazil, respectively, in an effort to facilitate and promote the expansion of bilateral commercial relations and provide a forum for cooperation to exchange information on commercial matters.

## The ANSI Federation

The voluntary standardization system in the United States is the most effective and efficient in the world. At the same time and almost incongruously, the system is distributed, diversified and extremely complex. For more than 76 years, this system has been administered and coordinated by the private sector through ANSI, with the cooperation of federal, state and local governments.

The Institute is a unique partnership of approximately 1,300 companies, 250 standards developers and other professional, technical, trade, labor, academic and consumer organizations, and some 30 government agencies. It is estimated that the annual sales of ANSI company members total more than $1.2 trillion. Thousands of scientists, engineers, and technical experts from the private sector and government work together in technical committees to develop American National Standards. These standards provide the technical underpinnings for the health and safety of our every day lives and for our domestic and international commerce in industries such as telecommunications, healthcare, information technology, petroleum, banking and household appliances.

ANSI's role also is unique. In its role as the only accreditor of U.S. standards developing organizations (SDOs), ANSI ensures the integrity of the standards development process and determines whether standards meet the necessary criteria to be approved as American National Standards. ANSI's approval of these standards is intended to verify that the principles of openness and due process have been followed and that a consensus of all interested parties has been reached. In addition, ANSI considers any evidence that the proposed American National Standard is contrary to the public interest, contains unfair provisions or is unsuitable for national use. ANSI coordination is intended to assist the voluntary system in ensuring that national standards needs are identified and met with a set of standards that minimize conflict or unnecessary duplication in their requirements. American National Standards are kept current and relevant because all such standards must be revised, reaffirmed or withdrawn at least every five years.

In the conformity assessment area, ANSI accredits organizations that certify that products meet certain standards. In addition, through a joint program, ANSI and the Registrar Accreditation Board (RAB) accredit organizations that register quality systems conforming to the ISO 9000 series of standards.

ANSI is the established forum for the U.S. standardization community, and is the United States representative to the two major, non-treaty international standards organizations: the International Organization for Standardization (ISO) and, through the United States National

Committee, the International Electrotechnical Commission (IEC). It also represents the U.S. in the International Accreditation Forum (IAF), which has the goal of reducing duplicative conformity assessment requirements (that often serve as non-tariff barriers to trade) by providing the basis for product certifications and quality system certifications/registrations performed once, in one place and accepted worldwide. ANSI also participates in the international Quality Systems Assessment Recognition Program (QSAR). Because of the breadth of its participation in standards activities worldwide, the Institute is able to provide a central source of information and education on standards, conformity assessment programs and related activities in the U.S. and abroad.

Through active participation in regional standardization organizations such as COPANT (for Latin America) and PASC (for the Pacific Rim), ANSI provides strong advocacy for the use of U.S. standards and technology throughout the global marketplace. In doing so, we work very closely with the National Institute of Standards and Technology (NIST), the Office of the U.S. Trade Representative (USTR), the U.S. Departments of Commerce and State, and other federal agencies, as well as with hundreds of trade associations, companies, and consumer and labor organizations.

In fulfilling its roles and responsibilities, ANSI continues to pursue its mission to "[e]nhance both the global competitiveness of U.S. business and the U.S. quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems and safeguarding their integrity." In summary, ANSI ensures the integrity of the U.S. standardization system by serving as (1) an open, national forum for standards-related policy issues, (2) the only accreditor of standards developers, ISO Technical Advisory Groups (TAGs) and an accreditor of product certifiers, and (3) a primary source of information and education on standards and conformity assessment issues.

## ANSI's Comments on the NRC Study Recommendations

We are here today to discuss *Standards, Conformity Assessment, and Trade into the 21st Century,* a study recently completed by the National Research Council (NRC) and its distinguished committee of experts.

The NRC and the committee are to be commended for producing an extremely well-researched, thought-provoking study. The study is important as a valuable resource document for those seeking a better understanding of standardization and conformity assessment issues. Even more important, it has stimulated what promises to be a productive dialogue about (1) the enormous importance of standardization and conformity assessment to U.S. competitiveness and environmental, health and safety concerns, and (2) the specific actions which should be taken to implement needed changes and strengthen existing public-private sector partnerships.

We are in agreement with the findings of the study, and are pleased with most of its recommendations. ANSI and NIST agree that some of the recommendations, in particular Recommendations Nos. 1, 2 and 3, point in the right direction but are complex and need further discussion on the most effective way to implement them. We understand that NIST, working together with ANSI, would be pleased to host a workshop on these issues this summer. Such a conference would provide an excellent opportunity for NIST and ANSI to bring together interested representatives from federal, state and local government agencies and from the private sector with the goal of reviewing the issues and concerns raised in the NRC Report and identifying specific workable solutions.

Our comments on the specific recommendations are as follows:

Recommendation 1: *Congress should provide the National Institute of Standards and Technology (NIST) with a statutory mandate to implement a government-wide policy of phasing out federally operated conformity assessment activities.*

*NIST should develop and implement a National Conformity Assessment System Recognition (NCASR) program. This program should recognize accreditors of (a) testing laboratories, (b) product certifiers, and (c) quality system registrars. By the year 2000, the government should rely on private-sector conformity assessment services recognized as competent by NIST.*

ANSI agrees with the underlying premise of this recommendation: the U.S. domestic conformity assessment system should be streamlined and, in most instances, the private sector can effectively and efficiently assess whether a certain product conforms to a particular government standard.

This is not news to the federal government. In Recommendation 94-1 (Federal Register, Vol. 59, No. 167, Tuesday, August 30, 1994), the U.S. Administrative Conference encouraged the use of private sector conformity assessment processes to meet regulatory needs and pointed out several advantages:

> In certain circumstances, this approach may result in better regulation because the agency's statute and rules are supplemented and enforced by those entities directly involved in the regulated activity, which may have more detailed knowledge of the operational or technical aspects of that activity. The regulatory program also may be more effective because it can be tailored to the individual industry or group. In addition, the agency's regulatory enforcement costs may be reduced by this approach....

The point is not that the federal regulatory and procurement agencies should abdicate all responsibility, particularly in connection with standards relating to public health and safety or environmental and national security concerns. The goal is to foster a public and private sector partnership whereby government agencies maintain their responsibilities in connection with the development of policy related to these types of regulations and requirements (participating in the private sector process and adopting by reference consensus standards when feasible, in part so that one assessment of conformity to both the relevant public and private standard(s) will suffice) and rely on private organizations, accredited by NIST-recognized accreditors, to conduct the appropriate conformity assessment tests.

Indeed, a number of activities are already underway to help achieve this objective. NIST, ANSI, and the American Council of Independent Laboratories (ACIL) recently began working together to address the very problems discussed in Recommendations 1 and 2 of the NRC study.

ANSI believes that Recommendation 1, as currently phrased, may be difficult for NIST to implement. What would be a statutory mandate for NIST (to implement a phase-out of federally operated conformity assessment activities) would be a policy statement for the federal agencies on whose cooperation NIST would need to rely.

Recommendation 2: *NIST should develop, within one year, a ten-year strategic plan to eliminate duplication in state and local criteria for accrediting testing laboratories and product certifiers. NIST should lead efforts to build a network of mutual recognition agreements among federal, state, and local authorities.*

*After 10 years, the Secretary of Commerce should work with federal regulatory agencies to eliminate remaining duplication through preemption of state and local conformity assessment regulation.*

We agree that the current rapid proliferation of conformity assessment regulations, particularly by state and local authorities, imposes substantial costs upon manufacturers with little or no value-added safety benefits for the ultimate consumer. Mutual recognition agreements would reduce, if not eliminate, this unnecessary duplication. This goal would be further facilitated if federal, state and local regulatory and procurement agencies were encouraged to harmonize their requirements. This has been accomplished to a large degree in the area of water quality because regulators at all levels have referred to the same American National Standards as a substitute for independent rule-making.

A number of activities are already underway in this area. ANSI, NIST, and the American Council of Independent Laboratories (ACIL) have formed an informal working group to identify problems and propose realistic solutions for laboratory accreditation at all levels of government.

Recommendation 3: *Congress should enact legislation replacing OMB Circular A-119 with a statutory mandate for NIST as the lead U.S. agency for ensuring federal use of standards developed by private, consensus organizations to meet regulatory and procurement needs.*

ANSI was pleased that the NRC Report confirmed that the U.S. consensus standardization system is effective in developing standards that meet industry's needs and adequately address public interest concerns. By increasing its participation in and reliance on the voluntary standards community, government can reduce both the need for federal regulation and its related costs.

Many regulatory agencies already participate in the private-sector standards development process and subsequently adopt or make reference to the resulting standards in regulations. For example, the Department of Defense announced that it will use private sector standards in lieu of military specifications unless no practical alternative exists to meet the user's needs. Defense Secretary William J. Perry stated that "this is one of the most important actions the Defense Department can take to meet the nation's military, economic, and policy objectives."

The Department of Housing and Urban Development incorporates by reference several model codes and standards into its regulations. The U.S. Coast Guard adopts standards developed by the National Fire Protection Association (NFPA), and the U.S. Coast Guard chairs a new NFPA committee developing a fire protection standard for merchant vessels. Indeed, there are over 200 references to NFPA codes and standards in the Code of Federal Regulations. In addition, two agencies -- NIST and the Department of Transportation's Federal Highway Administration -- are themselves ANSI-accredited standards developers.

Similarly, OSHA widely adopts privately developed standards, and actively participates in the standards development process. On May 21, 1991 ANSI and OSHA revised their long-standing Memorandum of Understanding to facilitate cooperation between the two organizations. The MOU details the manner in which technical resources and support from the ANSI federation are brought together for the purpose of assisting OSHA in carrying out its responsibilities. Also, to the extent consistent with its obligations under the Occupational Safety and Health Act of 1970, and other laws, OSHA makes its technical resources available to ANSI to assist it in meeting its mission. ANSI and OSHA maintain their close cooperation through active participation in activities of mutual concern. Cooperation and mutual exchange of information is accomplished via an ANSI/OSHA Coordinating Committee.

The Food and Drug Administration works closely with several private sector organizations to develop needed standards for medical devices and instrumentation. In addition, the FDA works very effectively with ANSI and with other federal agencies as an advocate for U.S. interests in international standards arenas.

In 1981, Congress instructed the Consumer Product Safety Commission to use voluntary standards instead of developing its own rules whenever feasible. Since then, the CPSC has relied heavily on the private sector process as a very effective approach to fulfilling their regulatory responsibilities in connection with consumer product safety.

These are just a few of many examples of government regulatory agencies' satisfactory use of voluntary consensus standards and their participation in the private sector standards development process. Both the public and private sectors benefit from each other's technical expertise and what many believe is a more efficient and flexible system. The financial benefits to these government agencies and the taxpayers (as well as industry if it is not required to meet unnecessarily duplicative standards) are obvious.

ANSI and the private sector standardization community have been fully supportive of OMB Circular A-119 and have worked closely with the Office of Management and Budget to develop its most recent revisions. In instances when its importance is recognized, the Circular works very well. The difficulty that ANSI and our standards developing organizations (SDOs) encounter is that the Circular is too often ignored, often by those who make decisions as to whether federal employees are authorized to devote time and travel expenses to participate in technical committee meetings or to work on documents in progress on government time.

If the U.S. government is to have a voice in the development of the standards that are at the heart of virtually every federal procurement requirement and many safety and health-related regulations, then federal resources must be devoted to support the full participation of federal employees in the standards development process. This will be especially important as federal agencies, operating with substantially reduced budgets, rely increasingly and appropriately upon private sector standards.

Similarly, if the U.S. is to maintain its leadership in international standardization in areas such as information technology and aerospace, then U.S. government representatives must participate in the development and presentation of U.S. positions that will be carried forward to the international arena. This cannot be done without the allocation of precious resources -- time and money -- to the effort.

We believe that OMB Circular A-119, while very helpful, is not strong enough in and of itself to ensure an appropriate level of federal participation in the voluntary consensus standards system. We believe that the Circular should be "enacted" in specific legislation that states in unambiguous terms that it is in the U.S. national interest for federal employees to participate in the U.S. voluntary consensus standards process and for federal agencies to adopt by reference and rely on consensus standards whenever feasible and practicable.

NIST's unique technical and standards-related expertise and its role as the Chair of the Interagency Committee on Standards Policy (ICSP) make it an ideal coordinator and facilitator of this process. It is ANSI's opinion that NIST should continue in that role and that the OMB should continue to be the entity that reviews NIST's reports and takes any action it deems appropriate.

*Recommendation 4: The director of NIST should initiate formal negotiation toward a memorandum of understanding (MOU) between NIST and the American National Standards Institute (ANSI). The MOU should outline modes of cooperation and division of responsibility between (1) ANSI, as the organizer and accreditor of the U.S. voluntary consensus standards system and the U.S. representative to international, non-treaty standards-setting organizations; and (2) NIST, as the coordinator of federal use of consensus standards and recognizing authority for federal use of private conformity assessment services. NIST should not be precluded from negotiating MOUs with other national standards organizations.*

*In addition, all federal regulatory and procurement agencies should become dues-paying members of ANSI. Dues will support government's fair share of ANSI's infrastructure expenses.*

ANSI and NIST are in the final stages of negotiating a Memorandum of Understanding which we believe addresses the specific points raised in the NRC Report. We believe that the MOU will delineate the unique responsibilities of ANSI and NIST and also reflect ANSI's and NIST's commitment to improving the partnership between the private and public sector.

ANSI's and NIST's unique roles complement each other and they can be an effective channel or focal point for many types of communication between the two sectors. ANSI and NIST already have been working together on many important projects effectively and cooperatively, and we look forward to continuing and expanding what is a very positive relationship.

ANSI has always encouraged the participation of regulatory and procurement agencies in the private-sector standards development process and as members of ANSI's various governance boards and committees. Not surprisingly, ANSI also would certainly welcome these agencies as dues-paying members of ANSI and thereby contribute to the significant administrative expenses ANSI incurs in fulfilling its many roles and obligations. As the NRC Report points out, dues from federal, state and local government agencies presently accounts for less than 1 percent of the total dues ANSI collects.

If Congress chooses to require appropriate federal agencies to become dues-paying members of ANSI, ANSI suggests that it might be reasonable to apply the dues schedule that recently was approved for ANSI's company members. New company members pay dues on a sliding scale depending on the amount of their annual sales, which in the case of federal agencies could be the amount of their budgets or appropriations. The scale begins at $250 and is capped at $25,000. Each agency could be required by Congress to pay their dues directly to ANSI.

Recommendation 5: *The Office of the U.S. Trade Representative (USTR) should continue ongoing mutual recognition agreement negotiations with the European Union. The USTR should also expand efforts to negotiate MRAs with other U.S. trading partners in markets and product sectors that represent significant U.S. export opportunities. Priority should be given to conclusion of MRAs on conformity assessment through the Asia Pacific Economic Cooperation forum.*

We agree with this recommendation and have been working closely with USTR in support of it. The reality of the global marketplace is here, yet there is not one global playing field. Differing and multiple conformity assessment requirements are a major handicap to the international competitiveness of U.S. industry. While there will probably never be an easy solution to the need for countries to ascertain if foreign products comply with appropriate standards, the negotiation of MRAs will certainly reduce this burden.

As described earlier in this testimony, ANSI is working with the IAF and QSAR programs in the private sector to obtain similar results.

Recommendation 6: *The USTR should use its authority under Section 301 of the Trade Act of 1974 to self-initiate retaliatory actions against foreign trade practices involving discriminatory or unreasonable standards and conformity assessment criteria. In particular, if U.S.-EU negotiations do not succeed within two years in securing fair access for U.S. exporters to European conformity assessment mechanisms, the USTR should initiate retaliatory actions under Section 301.*

We believe that it is more appropriate for the USTR's office to respond to this recommendation.

Recommendation 7: *NIST should develop and fund a program to provide standards assistance in key emerging markets. The program should have four functions:*

*(a) provide technical assistance, including training of host-country standards officials, in building institutional mechanisms to comply with the Agreement on Technical Barriers to Trade under the Uruguay Round of the GATT;*

*(b) convey technical advice from U.S. industry, standards developers, testing and certification organizations, and government agencies to standards authorities in host countries;*

*(c) assist U.S. private-sector organizations in organizing special delegations to conduct technical assistance programs, such as seminars and workshops; and*

*(d) report to the export promotion agencies of the Department of Commerce (such as the U.S. and Foreign Commercial Service) and the USTR regarding standards and conformity assessment issues affecting U.S. exports.*

We concur with this recommendation. NIST already has undertaken several initiatives in this area. ANSI supports these activities and recognizes the need for NIST to coordinate its efforts with the private sector, the official U.S. Technical Advisory Groups and Technical Advisors who formulate U.S. technical positions in connection with international standards being developed in ISO and IEC, respectively, and the ANSI policy committees who determine standards policy positions at ISO, IEC, COPANT, PASC, etc.

Recommendation 8: *NIST should increase its resources for education and information dissemination to U.S. industry about standards and conformity assessment. NIST should develop programs focusing on product acceptance in domestic and foreign markets. These efforts should include both print and electronic information dissemination, as well as seminars, workshops, and other outreach efforts. Programs should be conducted by NIST staff or by private organizations with NIST cooperation and funding.*

We concur with this recommendation and look forward to working with NIST on its implementation.

Currently ANSI and NIST are developing a common data source to provide information regarding domestic conformity assessment activities.

NIST's and ANSI's National Standards Systems Network (NSSN) project to establish a national electronic network that will interconnect various sources of standards information is underway. We anticipate that the network will (1) provide timely information on the status of standards development and conformity assessment projects, (2) provide an efficient and time-saving mechanism for collaborative efforts in drafting standards and standards-related documents, and (3) facilitate the dissemination of standards.

ANSI and the private sector believe that their information resources should not compete with NIST's, but rather complement each other so that each can meet their customers' needs as efficiently as possible. We support NIST's initiatives in this area and will continue to provide a focal point and facilitate close cooperation with the private sector.

In addition, ANSI recently received a grant from the Environmental Protection Agency (EPA) to perform outreach activities to assist small and medium-sized businesses in understanding the importance of the voluntary standards system and the potential impact of the ISO/TC 207 Environmental Management Systems standards. ANSI is organizing five regional meetings across the country this fall as part of this initiative.

Recommendation 9: *NIST should establish a permanent analytical office with economics expertise to analyze emerging U.S. and international conformity assessment issues. The office should evaluate and quantify the cost to U.S. industry and consumers of duplicative conformity* *assessment requirements of federal, state, and local agencies. To support the work of the USTR and other federal agencies, including those involved in export promotion, it should also collect, analyze, and report data on the effects of foreign conformity assessment systems and regulations on U.S. trade.*

We concur with the intent of this recommendation, for there is little or no authoritative economic data in these important areas. However, implementation of this recommendation might well require resources not currently available to NIST.

Recommendation 10: *The USTR's post-Uruguay Round trade agenda, including work through the World Trade Organization, should include detailed analysis and monitoring of emerging environmental management system standards and their potential effects on U.S. exports. Technical assistance should be provided to USTR by NIST.*

We concur with this recommendation.

This concludes my statement. I thank you for this opportunity to express ANSI's views and I would be pleased to answer any questions you may have.

Dr. Collins from NIST.

## STATEMENT OF DR. BELINDA L. COLLINS, DIRECTOR OF STANDARDS, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, GAITHERSBURG, MD

Dr. COLLINS. Good morning.

I am Dr. Belinda Collins, director of the NIST office of standard services. I would like to thank you, Madam Chairwoman, for the opportunity to testify before you and your committee today.

We at NIST deeply appreciate the comprehensive analysis recently completed by the NRC that has been described by the other witnesses. We are very pleased with the numerous references to NIST as a key factor in U.S. standards and conformity assessment activities.

Last year the United States exported about $700 billion worth of goods and services into an increasingly global market characterized by many barriers to trade. Many of these technical barriers to trade result from differences between the U.S. and our trading partners in both standards and conformity assessment practices. And by conformity assessment, I mean the process of determining that a product meets a standard.

While some of these barriers have legitimate purposes, such as protection of health and safety, others exist only to protect domestic markets.

The NRC recommendations do reinforce activities that NIST is already pursuing to strengthen our participation and the Federal Government participation in standards and conformity assessment activities in the U.S.

I am pleased to report that NIST and ANSI plan to sign a memorandum of understanding later this summer which defines the activities and responsibilities of both ANSI and NIST to make the U.S. standards system even more effective in the future.

NIST is also expanding its program to provide standards assistance in key merging markets and has increased its activities for education and information dissemination.

Finally, ANSI and NIST are working together to develop the national standard systems. Network which will provide on-line access for all standards and conformity assessment information.

While we agree with the problems identified in the NRC report, we do disagree somewhat with some of the means recommended for solving them. We do not think that NIST should be the agency which ensures Federal use of private standards to meet regulatory and procurement needs.

We do believe the Federal Government should continue to move from regulation to reliance on voluntary standards and note that this is already happening in some departments, notably Defense and Energy, partly encouraged by the interagency committee on standards policy which operates under the OMB circular and which is chaired by NIST.

Since NIST would prefer to be the lead agency to facilitate and to coordinate, not to manage Federal standards and conformity assessment activities.

We believe strongly that it is more effective to work with other Federal agencies and help them carry out their own programs as they move toward greater use of voluntary standards.

The NRC report also asks for NIST to implement policy to phase out federally operated conformity assessment activities and to establish a program to recognize private sector accreditors by the year 2000.

We agree vehemently that a primary goal for governments, both Federal and State, must be to reduce duplicate and multiple requirements for conformity assessment. And to achieve the goal of a consistent U.S. system for laboratory accreditation, one element of conformity assessment, NIST has been working with ANSI, ACIL and other private sector people to identify the problem, to suggest workable solutions for laboratory accreditation at all levels of government and in the private sector.

In conclusion, we at NIST believe strongly that we must continue our long history of working closely with the private sector and with other Federal agencies to develop effective systems for standards and conformity assessment that are led by the private sector, meet the needs of U.S. industry in a global market but which have the government input demanded by our trading partners.

Most other nations demand governmental assurance of the confidence of the conformity assessment bodies. We vigorously support the NRC recommendation that NIST work with the private sector to achieve this goal. Our systems of standard and conformity assessment must be recognized by our trading partners in the Americas, Europe and Asia if we are to achieve the goal of one product, one standard, one test, sold worldwide.

The time is right for the U.S. to assume a leadership role in standards and conformity assessment and NIST is pleased to work with our private sector and government partners to achieve our common goals.

Thank you very much for the opportunity to speak today.

[The prepared statement of Dr. Collins follows:]

# STATEMENT OF DR. BELINDA L. COLLINS, PH.D

DIRECTOR

OFFICE OF STANDARDS SERVICES

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

BEFORE THE

HOUSE SUBCOMMITTEE ON TECHNOLOGY
COMMITTEE ON SCIENCE

JUNE 29, 1995

## Introduction

The National Research Council (NRC), with strong assistance from industry, has successfully completed a major analysis of existing standards and conformity assessment activities in the United States, both private and public. Its report is a thoughtful and insightful presentation of the current situation, with specific recommendations for improvement. We at the National Institute of Standards and Technology (NIST) appreciate the effort that industry and NRC have made to assess NIST's current contributions to national and international standards and to determine additional duties that NIST should undertake to help improve the country's competitiveness. As directed by Congress, NIST funded the NRC study, but had no oversight role. The work is entirely that of the National Research Council and the experts who consulted with NRC staff. We appreciate the confidence expressed in NIST and will continue to pursue the goals of improving the effectiveness of the standards and conformity assessment processes in the United States. We are pleased with the numerous references to NIST as a key factor in U.S. standards and conformity assessment activities, as well as the suggestions for major changes in our role, with increased responsibility for federal activities in standards and conformity assessment. We agree with the recommendations, although there are several places where we think that the goals might be achieved better by a slightly different path. We are certain that minor differences in opinion can easily be overcome in future discussions.

Before commenting on the NRC report, I would like to draw the attention of the Committee to the dramatic changes in international markets that form some of the background for NIST's standards activities. These changes impart urgency to the efforts of the U.S. Trade Representative, the International Trade Administration, and the National Institute of Standards and Technology to secure free access to international markets through metrology, standards, and agreements for conformity assessment.

## The Spirit of Bretton Woods

Last year the United States exported about $700 billion worth of goods and services. These goods and services were sold into an increasingly competitive global market with many barriers to trade. Trade experts have indicated that additional exports worth $20 to $40 billion could be produced right now, if we could overcome all technical barriers to trade (TBT), but the real problem is that more exports may be lost as technical barriers to trade proliferate.

Most technical barriers to trade (TBT) result from disparities in standards and conformity assessment practices between the United States and our trading partners. Some non-tariff, technical barriers to trade have legitimate purposes, such as the protection of human health and safety, protection of the environment, national security, etc. Some barriers are caused, perhaps inadvertently, by outdated normative standards, rules or regulations, or are based on misperceptions. However, many trade barriers have no legitimate purpose, but exist only for the protection of domestic markets. At Bretton Woods in 1944, the intellectual basis for worldwide economic cooperation and for open markets was laid, and the concepts of the International Monetary Fund and the World Bank were developed, but the spirit of that conference is gone. Rampant nationalism was obvious during the many years of negotiation of the World Trade Agreement, and is even expressed in what was and what was not covered by the final agreement. Now, industry not only faces a more global market, but it faces one in which governments distort the "playing fields." In the longer run, no nation is going to benefit. We all need to cooperate for our mutual advantage, to level the playing field, and to overcome the barriers to trade.

It is no longer sufficient that a product has a large market, is of good quality, and reasonably priced. Technical barriers to trade must almost always be overcome or dealt with in a constructive fashion to gain access to the market before anything can be traded. Not only is this situation serious, it is also getting worse. European standards organizations are making great efforts to assist standards laboratories in developing markets. Millions of dollars for equipment and hundreds of months of training are spent on these laboratories in a seemingly charitable effort to support fellow metrologists. Actually, this support may be less charitable and more directed at gaining control of markets. In the process, practices are introduced that we, in the United States, consider to be technical barriers to trade. To the extent that this effort succeeds, the "playing fields" are distorted. This is quite obvious in Eastern Europe, Russia and the Newly Independent States (NIS), Turkey, and South and Central America.

Not only traders from the United States, but everybody trading in the world market, must now be prepared to satisfy these two necessary conditions to enter the competition:

(1) Assurance of conformity of products or services to the standards of the receiving market. Conformity assurance requires: a recognized metrology system built around a capable national measurement laboratory with documented calibration chains to the points of use; accredited testing laboratories; recognized accreditors for certification procedures; and registered quality management systems. To market competitive products and services, customers must often have NIST-traceable calibrations of documented uncertainty and the assurance of a NIST quality management system in place.

(2) Proof of a quality management system for products, services, and operations (ISO 9000). Customers need this for access to markets, to reduce risk in the market place, to satisfy market demand, and to comply with requirements of regulatory agencies.

NIST has expanded its standards activities to help industry to avoid or overcome technical barriers to trade, provide technical input for negotiations to remove technical barriers to trade, and to promote use of U.S. technology and practice in international standards. For this purpose, NIST is working with the State Department to provide standards services in major markets. NIST will use its technical expertise, its reputation for integrity, and its extensive contacts in foreign countries to help keep international markets open.

**The Market of the Americas**

At the 1994 Summit of the Americas in Miami, all heads of state of the Americas, except Cuba, affirmed their commitment to a plan of action that will lead to a "Market of the Americas." The formation of this "Market of the Americas" finds most of these countries unprepared to collaborate efficiently, because they lack a technological infrastructure, i.e., measurement standards, legal metrology standards, normative standards, and conformity assessment tests. In addition, European standards laboratories have made strong, well-funded efforts to introduce European, design-based standards in South and Central America, which could constitute technical barriers to trade to U.S. industry. Even now, the lack of a rigorous measurement infrastructure threatens the continuation of regular air traffic to/from the United States. All of this will prevent the United States from taking full and early advantage of the new larger market in the Americas. Efficient national and international trade requires the following technical organizations and systems throughout the Americas:

(1) Weights and measures organizations that assure uniform and accurate measures used in trade,
(2) National or regional measurement standards laboratories traceable to NIST,
(3) Standards development organizations,
(4) Accredited and internationally recognized calibration and testing laboratories,
(5) Comprehensive staff training for a variety of trade-related tasks,
(6) Communications systems, and
(7) A program to assist U.S. companies to develop this new market.

Without these systems and organizations, trade will be severely impeded, nations will set up technical and nontechnical barriers to trade, markets will be disordered, trade related information will not be readily available, and U.S. companies will lack access to markets. To some extent this is the case in Mexico now, because we did not realize early enough what needed to be done to prepare for NAFTA. The Plan of Action formulated at the Summit contains specific actions, like those suggested here, that will lead to the promotion of integration and improved infrastructure.

Easy access to markets for U.S. companies will be assured if the United States could: (a) lead and participate in setting up the required organizations, introduce U.S. or international standards, train staff, and (b) assist U.S. companies to penetrate this new market. A very proactive stance in creating and maintaining this system will assure that we will have influence on its development. This influence should be extended into the Asia-Pacific sphere as well, where the Asia Pacific Economic Council (APEC) has declared the goal of an open market among all members by 2020.

NIST has the necessary combination of staff expertise, worldwide recognition as a leading standards institution, industry contacts, and is highly respected for its integrity. NIST's Technology Services has considerable experience and ongoing activities in organization development, international standards in trade, national and international calibration and testing services, technical training programs in South and Central America, etc. Based on this extensive experience Technology Services plans and coordinates efforts in close cooperation with the International Trade Administration and other government and private organizations as appropriate. NIST-Technology Services is enhancing its network of local representatives. We are beginning with offices in Mexico and Argentina. These offices will be our primary contact points for technical and organizational support of in-country work and for service to U.S. industry.

This initiative leverages U.S. imports into a market (South and Central America) that now absorbs more than $100 billion in goods and services. Imports into this market are expected to grow at a rate of 7 percent, which is far above the rate of growth of GDP. However, unless the metrology, standards and conformity assessment systems in the Market of the Americas are coordinated with U.S. practices, most of the increased imports will come from Europe, particularly from Germany and France.

**The NRC report on "Standards, Conformity Assessment, and Trade"**

The recommendations given in the NRC report support the efforts that NIST has undertaken and supports the development of a technical infrastructure in the Americas and the Asia Pacific Area. Our comments on the NRC report refer only to the specific recommendations for NIST. We will defer comment on the recommendations for the U.S. Trade Representation (USTR) to officials from that agency. We will, of course, continue to provide technical support for USTR and other agency activities as called for in the recommendations.

NIST has a long history of participation in the private voluntary standards process, and is committed to continue efforts towards its success. Since the inception of NBS/NIST in 1901, our staff have traditionally been extremely active in the development of standards by private sector organizations. We currently have 376 staff participating as technical experts in more than 819 voluntary standards committees in about 80 organizations both national and international. NIST participation in the American National Standards Institute (ANSI) has long been a priority, and, in fact, NBS worked with other private sector standards developers to establish ANSI in 1919. Our technical participation in private sector standards activities and our record of cooperation with ANSI and the other private sector standards developers is valued by the private sector.

We have already initiated action on many of the NRC recommendations. Thus, Recommendations 2, 4, 7, 8, 9, and 10 reflect activities that NIST has already undertaken, and we welcome the support in the NRC report for them. For example, NIST and ANSI expect to sign a Memorandum of Understanding (MOU), as called for in the report, by mid-summer. We believe that this MOU will reflect the activities and responsibilities that both ANSI and NIST have to make the U.S. standards system even more effective in the future. As the NRC report recommends, NIST is currently expanding its program to provide standards assistance in key emerging markets. NIST has launched its trade support program patterned after the successful technical assistance program to Saudi Arabia which was proposed by the Congress in 1988. In cooperation with the private sector in 1990, NIST began the Saudi project which reversed the trend by Saudi Arabia to embrace European standards, thereby discouraging import of products made to U.S. standards. Since 1990 U.S. imports to Saudi Arabia have increased significantly. As part of our FY 95 initiative, we have enhanced our standards services program in Brussels for the European Union, and will expand services in Mexico City, Buenos Aires, and New Delhi by mid-summer. This effort will continue to carry out the activities envisioned in the NRC recommendations, and will be coordinated closely with ANSI and with other U.S. standards developing organizations. NIST hopes to expand the program to as many other priority countries as resources permit.

As the NRC report recommends, we have increased our resources for education and information dissemination, with training courses now provided for standards and metrology experts from Russia; the Newly Independent States; India; and the Caribbean, Central and South America. To date in 1995, we have already conducted three two-week training sessions at NIST aimed at Russia, the Newly Independent States, and India. Each training session closely involves representatives from the private sector and from other government agencies depending on the target sector. The experts from Russia and the NIS have spent six weeks in the private sector with key industries, as well. This training provides them with first-hand insight into U.S. industry's role in the standards process and in turn provides us with key contacts and information about standards activities in Russia and the NIS. A major result of these training efforts is greater adoption of U.S. technology, standards, and conformity assessment practices which greatly enhances our competitive advantage in the global marketplace.

Other educational efforts at NIST include training in fundamental measurements (or metrology) and standards activities at several locations in Latin America. Our key handbooks in weights and measures as well as those for laboratory accreditation, are being translated into Spanish to assist U.S. NAFTA and hemispheric initiatives. In addition, NIST is working with ANSI to develop the National Standards Systems Network (NSSN) which will eventually provide on-line access to standards and conformity assessment information. This project is a co-funded project under the Technology Reinvestment Project which will reduce the time spent in the process of standards development. As the NRC report recommends, NIST has also increased staff expertise in economics to analyze standards and conformity assessment issues. The NRC recommendations are most welcome for their emphasis on NIST's continuing activities to provide the technical infrastructure for standards and conformity assessment activities in both the private and public sectors. They reinforce the activities that we are already pursuing to strengthen the private, voluntary standards system in the United States, while continuing to pursue those activities where federal government involvement is needed.

We agree with the problems identified in the report, but disagree with the means recommended for solving some of them. In particular, we are concerned about the recommendation for greater centralized control by NIST in the standards arena. Thus, Recommendation 3, which calls for NIST to be the **lead** agency for **ensuring** federal use of private standards to meet regulatory and procurement needs appears, unnecessary. We agree that the federal government should continue to move away from regulations to reliance on voluntary standards, but note that this is already happening under direction by specific agencies. For example, the Department of Defense, the primary creator of government standards, is carrying out a major initiative to move away from MILSPECS to voluntary standards for procurement. Similarly, the Department of Energy has initiated a major program to review all the departmental standards and move to a performance-based standards process using voluntary standards. These activities are happening under the leadership of the Interagency Committee on Standards Policy (ICSP) which is chaired by NIST. Since June 1993 the ICSP has markedly intensified its efforts, meeting quarterly, with additional special briefings. The ICSP now has working groups for ISO 9000, laboratory accreditation, and standards policy. Through the industry quality liaison panel, key federal procurement agencies have signed a Memorandum of Understanding, which commits them to move to one quality system, such as ISO 9000, for their suppliers. Under OMB Circular A-119, this Committee annually reports through the Secretary of Commerce to the OMB on agency performance on increased use of private sector standards for regulations and procurement. This process leaves the responsibility of using voluntary standards with the relevant agency but charges NIST with reporting their use to OMB. NIST would prefer to be the lead agency to facilitate and coordinate agency activity, not **manage** federal standards and conformity assessment activities, as already occurs under OMB's mandate in A-119. We believe strongly that it is more effective to work cooperatively with other federal agencies and assist them to carry out their own programs. Our limited resources are better spent in supporting the other NRC recommendations.

Another major recommendation (1) in the NRC report calls for Congress to mandate that NIST implement policy to phase out federally-operated conformity assessment activities and to establish a National Conformity Assessment System Recognition (NCASR) program to recognize private sector accreditors by the year 2000. We agree that a primary goal for governments (both federal and state) must be to reduce duplicate and multiple requirements for conformity assessment as much as possible. We are committed to working with all the stakeholders to develop a program such as the proposed NCASR.

To achieve the goal of a consistent system for laboratory accreditation within the United States, NIST is working with ANSI and ACIL (the association of independent scientific, engineering and testing firms) through an informal laboratory accreditation working group (LAWG) to identify problems and suggest workable solutions for laboratory accreditation at all levels of government. Our goal is to develop a private-public approach that reduces the problems created by conflicting private sector, federal and state requirements in conformity assessment and that proceeds toward an efficient, uniform laboratory accreditation infrastructure. We envision that this approach could also be extended to other forms of conformity assessment. In this process we will reduce federally-operated conformity assessment programs, while continuing to meet foreign government demands for assurance of competence of U.S. conformity assessment bodies. This process requires the type of long-term strategic planning called for in the recommendations.

NIST has a long history of working with the private sector to solve problems in conformity assessment that face U.S. industry. Thus, in the 1970s U.S. industry came to the National Bureau of Standards (now NIST) asking us to set up a system for qualifying the competence of laboratories used for testing products for industry. We responded by creating the National Voluntary Laboratory Accreditation Program or NVLAP -- a program which continues to meet industry needs in laboratory accreditation to this day. To support international traceability of fundamental measurements, we have just established an accreditation program for calibration laboratories in NVLAP. This is a major step toward European recognition of U.S. accredited laboratories.

In the 1980s as the U.S. participant in cooperation with ANSI in the international standards information network, we were required to make information available on product certification programs. To achieve this goal we created a series of publications compiling information on all product certification activities in the United States. We continue to work with ANSI to this day on information sharing, notably in the cosponsorship of the National Standards Systems Network, and in almost daily exchange of information. In the 1990s the government of the European Union indicated that they would require governmental assurances of the acceptability of conformance approvals produced in the United States. We responded by creating the National Voluntary Conformity Assessment System Evaluation (NVCASE) program which will provide NIST recognition of conformity assessment done in the United States for products to be sold abroad. This system will meet the needs of the European Union and will mean that a product produced in the United States will not have to be retested in Europe. In each case, NBS/NIST has responded to an expressed private sector need to make the U.S. standards system more effective. NIST is prepared to respond to industry's needs by considering the development of a domestic oversight responsibility for conformity assessment, as indicated in the NRC report. The principles underlying this recommendation are sound, but their implementation is complex and will require careful study and preparation before they can be executed.

We at NIST believe strongly that we must continue to work closely with the private sector, and with other federal agencies to develop systems for standards and conformity assessment that are led by the private sector, but which have the government input demanded by our trading partners. The United States cannot operate alone in a global market. Standards and conformity assessment procedures, such as product certification, laboratory accreditation, and quality system registration, are key elements of successful trading strategies. Our systems must be recognized by our trading partners in NAFTA, the European Union, the Market of the Americas, and the Asian Pacific Economic Cooperation if we are to achieve the goal of one product, tested once, sold worldwide. Most other nations demand some form of government recognition of the competence of conformity assessment bodies -- we vigorously support the NRC recommendation that NIST work with the private sector to achieve this goal.

NIST, working together with ANSI, would be pleased to hold a workshop this summer on the issues discussed in the NRC report. Such a conference would provide an excellent opportunity for NIST and ANSI to bring together interested representatives from federal, state and local government agencies and from the private sector with the goal of reviewing the issues and concerns raised in the report and identifying specific workable solutions.

NBS/NIST has always been a source of technical information and assistance to the private sector, federal regulators, and trade promotion agencies. Our publication program has distributed thousands of copies of "Questions and Answers on ISO 9000" alone. We have been assigned additional informational responsibilities under the technical barriers to trade section of the World Trade Organization. We notify other governments of proposed changes in U.S. regulations that might affect international trade, and in turn notify U.S. industry of proposed changes in foreign regulations that might affect their products. We provide technical information to assist U.S. industry in interpreting these regulations. NIST also maintains a national center for information on standards and certification which responds to more than 10,000 inquiries a year. Finally, we collect and analyze data on the federal government participation in the development and use of standards. We continue to work closely with ANSI and other private sector "multipliers" to disseminate this information as broadly as possible within the private sector. We anticipate even greater future use of information technology will considerably enhance our capabilities to analyze standards and conformity assessment issues and inform both the professional and lay public on their importance and use.

In conclusion, we at NIST deeply appreciate the recognition of our years of work in standards and conformity assessment shown by the National Academy of Science and its panel of private sector experts in the NRC report. We agree with the spirit of the recommendations that the federal government move toward greater reliance on voluntary standards and conformity assessment with minimal dependence on in-house regulations. We are committed to continuing to work with other government agencies at all levels, and with the private sector, to build an effective system of voluntary standards and conformity assessment that meets the needs of U.S. industry in a global market. These efforts are urgently needed at a time when markets are expanding in the Americas and Asia. The time is ripe for the United States to assume a leadership role in standards and conformity assessment. Greater use by our trading partners of the free market, voluntary, private sector system pioneered by the United States can only reinforce the spirit of Bretton Woods.

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Biography

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Belinda L. Collins is currently the Director of the Office of Standards Services at the National Institute of Standards and Technology (formerly National Bureau of Standards). She has been at NIST since 1974, and served as Leader of the Lighting Group in the Building and Fire Research Laboratory of NIST from 1984 to 1995. She received her B.A. in experimental psychology from Mary Washington College, and her M.A. and Ph.D. in experimental psychology (vision) from the University of Virginia. Dr. Collins has authored numerous technical publications in the area of lighting and human response and is a Fellow of the Illumination Engineering Society of North America, and recipient of the NIST Bronze Medal.

Mrs. MORELLA. Thank you very much, Dr. Collins.

I guess I will just start with a couple of questions, and then see the questions Mr. Tanner has, and come back to the second round if time allows.

A major area of concern regarding standards and conformity assessment continues to be the role of the public and private sectors.

I just wonder if you might, each of you, comment on the role that you think the Federal Government should play in the standards setting and conformity assessment process.

I realize this has come through somewhat in your statements but if you would like to address that specifically, the role that you think the Federal Government should play. I think you are going to probably say a partnership, coordinate, but don't mandate.

But let's see what you think.

Dr. HUFBAUER. Briefly, our committee came to the conclusion that there are certain areas, perhaps exemplified by FDA which are intimately involved in health and safety where the government should remain the standards writing area.

However, generally speaking, and I am obviously a private sector person—I work with a think tank—the government has run amuck in this area. The government needs to reined in. Particularly, the Defense Department needs to be reined in. And the Defense Department recognizes that, but people come and go in the Defense Department, and that is why our committee wanted NIST to have a strong enduring role to use private sector established standards wherever possible.

I mean, it is a highly technical question. I can't give you the absolute dividing line in any one time. But we think NIST has that technical competence and should be the spearhead on this standards setting to move that into the private sector wherever possible.

Briefly, conformity assessment, and here I somewhat repeat what I said, our committee came to the conclusion that there really is a very, very little role for the government in conformity assessment. So, to take an example, there might be an OSHA standard on noise level out of machines. But whether or not a particular machine meets that standard, OSHA has no need to have a lab to determine that. There can be a private sector lab that determines that, and that private sector lab is accredited, and the accreditor is, in turn, recognized by NIST and, of course, that recognition means that we are leaving out fraud, and so forth, and that is what the recognition means in terms of surveillance but it also provides an endorsement to foreign governments and within this country that this change when they finally say that the machine meets the noise standards we can rely on it.

Thank you.

Ms. MARASCO. Our view is that the Federal Government agencies, representatives from those agencies, should participate in the private sector process for developing standards and adopt by reference the resulting standards.

We realize that when a standard is being developed in the area of health or safety, and that the purpose of the development of the standard is to have it be adopted by reference into a regulation, that it is very important that the Federal agency participate in the development of the standard and approve the final standard.

We certainly would not ask that the government agencies abdicate their responsibility in that regard, and ANSI certainly recognizes government's responsibility there.

In terms of conformity assessment, just as we have the OMB Circular A–119 which recognized the benefits of the government participation in the development process and the adoption of standards, the U.S. Administrative Conference Recommendation 94–1 also recognized the benefits of using the private sector in conformity assessment testing and measuring.

Again, it suffers from the same weaknesses that the OMB Circular A–119 suffers from in that it is just a policy, but it does recognize that using the private sector to help develop and to test for conformity assessment requirements can benefit from the expertise of the particular business sectors that are involved. They are the ones who can better assess what kinds of tests should be done.

So we support the NRC report's recommendations in that regard as well.

Dr. COLLINS. Thank you very much.

Let me, first of all, say I have seen a copy of the legislation, and I think that goes a long way towards recognizing NIST as a lead agency to coordinate and facility Federal activities in the voluntary system both for standards and conformity assessment, and I think that will make NIST's life easier as we go along the road.

I think government's role in the standards process must continue to be obviously that of a partner and a participant.

I think one of the things that the Federal Government brings to the table is its expertise in particular areas of regulation or just general technical expertise overall. And this is needed as you develop standards to replace regulations.

We look for NIST to begin to work on coordinating activities in this arena but not to police them.

The same thing applies in conformity assessment although, in fact, there is not any Federal agency or State agency that has a lead role in conformity assessment. So much of that is operated in the private sector. Some is operated in government and is not a coherent system.

We need to work towards a public/private partnership that takes care of all the elements of conformity assessment, product certification, laboratory accreditation, ISO, ISO 9000, quality system registration. Government at all levels, and I include the States in this as well—in fact, that may be where much of the problem occurs—must work with the private sector and develop a workable system for all of us.

Thank you very much.

Mrs. MORELLA. Thank you.

I just wanted to point out, you said that you have already seen the amendment that the committee approved. Basically for the amendment we took recommendations 1, 2 and 3 and sort of combined them in making NIST the lead agency for that.

I appreciate your comments. You know one of the amendments also that was offered in a markup dealt with mandating DOE to establish energy standards for such things has light ballast, TVs, et cetera.

The question was should we require DOE to do that? I felt that we should not do that. I just wondered if you would like to briefly comment on that.

Dr. HUFBAUER. Absolutely.

For Congress to mandate DOE to start setting standards in my personal view and our committee's view is exactly the wrong direction, exactly the wrong direction, and that these standards ought to be done in a partnership sounds like a friendly way, but to have a government agency getting back into the standards writing business we are back to where mill specs came from and impose enormous cost on our economy and they could do the same damage in energy, I am sure, with no effort at all.

Ms. MARASCO. I agree with the comments made by Dr. Hufbauer, and I would point out that we do instead encourage them to participate in the process of developing the standards in the private sector and contribute their expertise and better leverage the private sector process.

Mrs. MORELLA. Would that be the same with energy efficiency standards?

Ms. MARASCO. Yes, that would be our view.

Dr. COLLINS. Furthermore, I believe that DOE is already participating in some of the American national standards being developed by the Illuminating Society which I am also a member of, and by the American Society of Heating Air-conditioning Engineers, again which is concerned with energy standards. I believe that DOE ought to be increasing its participation in these activities.

Let me point out that one of my concerns as we go down the road is that Federal participation in the voluntary standards community may be threatened by lack of resources to do this participation. Standards setting activities is often one of the first things to get cut when time gets tough. I remain concerned, as I know my private sector partners are with Federal participation in these arenas.

Mrs. MORELLA. I will just ask you one more question and then yield to my ranking member here.

It has to do with the time it takes. It just seems to me that the standards development process is lengthy and can go from up to four or five years maybe even and with technology moving so very quickly. Do you think that the current standards system is sufficient, and do you think we can develop standards or some modus operandi where we can reduce that length in time?

Dr. HUFBAUER. Our committee wrestled with that one quite a bit, and we discussed it in the report.

Our considered view is that there is a market for the establishment of standards and when the market participants, and it is a voluntary system and somebody affirms it, sends representatives, and so forth, when these people can't agree, our general view is the market is saying we don't need a standard in this area now. We don't need it very quickly.

And you can have a problem of too many standards as well as too few because when you have a standard that means that the stuff which is off standard that is smaller market and is not so readily accepted and the standards get built into procurement specs, et cetera, et cetera, and we think that the concern that it might in some cases take 10 years is basically a misplaced concern.

If the voluntary system doesn't find the interest to drive it forward, they are voting with their feet. They are voting with their valuable management time that this is not an AT standard.

So, therefore, we do not recommend, and this is after many, many hours of deliberation, any kind of Federal prod, let's say, to let's get it done now. That is a mistake.

Ms. MARASCO. I agree with Dr. Hufbauer's comment that the system is market driven and it often proceeds at the pace that the participants, especially all of the materially affected persons who participate in the consensus process, want it to proceed at.

One of the benefits of having a consensus process is it provides a level playing field for all interested groups and all size of participants whether large or small and otherwise influential in the marketplace or not as influential.

We also believe that as we make better use of information technology tools we expect that the process will accelerate. As Dr. Collins mentioned earlier, we are working together on a joint project called the NSSN, the National Standards System Network, which is going to be a national electronic network for standards information.

One of the aspects of this network is that it will promote collaborative efforts in drafting standards related documents on line, which we think will also expedite the process.

Dr. COLLINS. I agree with my two previous speakers. I think the consensus process in itself is not always a speedy one. I think it also takes resources and commitment of people to participate on a regular basis and having hit or miss participation often slows things down.

I also believe that electronic exchange of information can be used to facilitate the process to consider holding meetings on line, to exchange information, draft documents, all of those tools can be used to stretch our limited resources as far as they can go.

I do not believe the Federal Government has any place telling ANSI or any other standards developer that they must speed up their processes.

Mrs. MORELLA. So leave us alone; we will collaborate with this network. We will use on line; we will become more sophisticated and market driven will do it.

I thank you. It is amazing how you all agree.

I am now going to recognize our very distinguished ranking member, Mr. Tanner, for any questions.

Mr. TANNER. Thank you, Madam Chair.

I think you covered it very well, and I have listened with interest.

I am familiar with the mill specs that you talk about being on the Armed Services Committee and trying desperately over the last six years to help rewrite or convince the Pentagon to rewrite some of their specifications.

I know that the American business is desirous of goals you outlined. It seems to me any business entity in this country who wants to engage in international trade would be desirous of the same. And in that vein and hopefully adhering to the principle that I share I know with our chair lady, the government should be an ally and not an enemy of business.

Comment on how other countries handle this, particularly the economic rivals that we have in the world.

Dr. HUFBAUER. The report spent quite a bit of time on Europe because Europe has the most highly articulated system. The European system, broadly speaking, involves government-industry cooperation in setting standards at a European Union level in several key industries, and this is a pretty broad generalization.

In many of those industries U.S. firms feel able to participate in the standards setting process. In some of the industries, and I should probably mention telecommunications, it has been a thorny issue, and there are fears or apprehensions that sometimes the Europeans may set standards in a way that is deliberately designed to exclude U.S. telecom products.

So it is a mixed bag across the industries in this government-private sector.

About five years ago—maybe 10 years ago—there was a lot of thinking that this, say, a greater government role in setting standards was the right way to go and gave Europeans some kind of competitive advantage in world markets, and so forth and so on. Our committee concluded that that is absolutely wrong.

Our voluntary private oriented system is far superior in terms of coming to conclusions quickly and in not engaging in discriminatory practices which then lead to trade battles down the line.

And, further, we think most of other countries in the world are more likely to gravitate to the U.S. system with some education and private sector efforts on our part, NIST work and private sector work, than to the European-type of system.

Briefly, turning to a few other areas, Japan has often used standards and particularly conformity assessment as a trade barrier.

We have just been through the auto case in the after markets and the designated garages and the certified garages, and that is exactly the use of a conformity assessment system which kind of spills into a very, very big trade battle, but it is exemplary, I am afraid to say, of what Japan has often done, and it causes us many problems and has motivated some of the recommendations in this report of a fairly aggressive U.S. star effort in this situation.

Coming to other parts of the world, they are hungering for information on standards. They like to participate and some countries do participate in the voluntary standard setting system which is one could say coordinated, if I could use that word, by ANSI in this country, and it is an open system. It is open to other countries. They want to know about our standards. With very small budget resources, which we recommend in the report, we think NIST can do a terrific educational job bringing their experts here and our experts over there, and so forth.

So kind of the world is our oyster in this area if we wish to use it.

I have used more time than I should.

I will briefly mention that our committee felt that the ISO 9000 approach took the U.S. by surprise. It is now a fact. We are adjusting to it. Probably down the line is a similar approach in ISO 14,000 beyond in the environmental area where we must have a much more heads-up approach to this which has major, major trade implications in the future.

Mr. TANNER. Thank you.

Ms. Marasco.

Ms. MARASCO. Our system is much more distributed than systems are in most other countries, but we believe that it is much more flexible and it enhances different ways for different sectors to compete abroad, and that is a big plus.

Recently Standards Australia, which is a quasi-government organization that is ANSI's counterpart in ISO and IEC, asked ANSI to describe in great detail how our private sector standards processes and ANSI itself is organized and how that works because they had a great interest in taking parts of what they do and giving it to the pure private sector to administer because they thought they saw there would be some competitive advantages in that.

So, I believe that while our system is to some extent unique, I think there are countries out there that are looking at it and thinking that there are some benefits to the way that it is more of a partnership between the public and the private sectors and that the private sector aspect of that is distributed, but it does provide for greater flexibility.

Mrs. MORELLA. Will the gentlemen yield?

Mr. TANNER. I yield.

Mrs. MORELLA. I just wonder, do you find a great interest also in like Central and Eastern Europe and the former Soviet republics, the new republics in the developing areas like that.

Dr. HUFBAUER. John could speak to that.

Mr. GODFREY. Actually, I think Mr. Jerry Ritterbusch on the second panel has in his written remarks some comments very directly related to that.

Dr. COLLINS. Actually, I am finding considerable interest in almost all regions of the world in the U.S. process and in developing workable systems so that we can actually achieve this goal of one product, one test, sold worldwide.

I think it is important to point out that the reason that the president of ANSI is not here right now is because he is at a conference convened by Secretary Brown in Denver to address the Market of the Americas, to address standards and conformity assessment issues that are needed to be resolved before we can really develop a workable system throughout the Americas.

So that activity is going on. NIST has been involved in some of the very fundamental measurement concerns in the Americas.

There is a conference right now in Japan on the Asian Pacific economic cooperation again which talks about developing workable systems for a standards and conformity assessment in the Asian region again aimed at supporting the international activities.

And then there is considerable interest in the former Soviet Union republics and, in fact, at NIST we recently hosted two different training seminars for folks from Russia, Ukraine, Belarus, et cetera, to come and learn about standards and conformity assessment activities.

The first was automotive. The second was experts from the medical sector fields.

We worked with ANSI to put on a training course at NIST describing how the U.S. does business, and then we took them out in the private sector. They spent six weeks and again learned first-hand how the U.S. does business. I think they are beginning to see the light.

Mr. TANNER. Thank you.

I was reading some of the periodicals. You say one product, one test, sold worldwide. I just read an article last night on some of these paramilitary groups. They might accuse you of engaging in some sort of overthrow, of a worldwide conspiracy. There are some wild people out there.

I don't have really any other questions of the panel. We really appreciate you being here this morning, particularly as we try to blend the public-private partnership sector so that government truly can be beneficial and helpful and an ally of our businesses, because being on the Armed Services Committee, as I said in the markup of the full committee last night, I am convinced that although there is a military threat out there, it is not the same as it was virtually all of my life, and our biggest challenge as a people as a country now is to equip our businesses to compete in the new economic order that is taking place.

I personally was very glad to see them reach an agreement with the Japanese on the automobile business. We stood our ground, and I was particularly pleased that we did that.

So I thank you all for being here. Whatever you do to assist our country in competing worldwide, we appreciate.

Mrs. MORELLA. Thank you, Mr. Tanner.

I just wanted to ask you, is there any legislation that would be necessary to develop conformity assessment certifications systems? Just say yes or no.

Dr. HUFBAUER. Well, our recommendation, I believe that is the recommendation Ford is on—no, it is recommendation 3 called for legislation which would—I got my numbers wrong. Recommendation 1, I guess.

Basically, we want—recommendation 1 and 2 which somehow has been included, we would like to see NIST have this lead role. I think it would take a Federal statute to indicate that in time, and we are giving it 10 years, NIST should be able to recommend probably to the Secretary of Commerce to preempt State and local systems.

This is after a lot of negotiations, and so forth, to try to work around these duplicative accreditation problems.

John had a passage in our report which may be worth just reading. John, do you have that then?

The system is that a laboratory seeking nationwide acceptance to conduct electrical safety-related materials testing must gain accreditation from at least 43 States, 100 local jurisdictions, 3 independent building organizations, several Federal agencies, including OSHA, NVLAP, and several large manufacturers.

Now think about what this really means in real life.

What it means is that underwriters has already done all this. What about the new lab that is trying to set up and do this? That is a huge expense to get in to compete in that business of being a conformity assessor.

That is what we are suggesting should be preempted in time after we try to have mutual recognition between the States, and so forth.

That is a pretty strong recommendation. Probably it is not in the legislation this year.

But we think it should be in legislation in time so that we can have a much more effective system domestically and then be able to talk much more authoritatively to foreign governments that we have a single system, "Don't block us; we're not blocking you."

Mrs. MORELLA. Thank you.

Ms. MARASCO. We agree basically. There are two aspects to this, and I think they are reflected in recommendations number 1 and number 2 in the NRC report.

Recommendation number 2 addresses this mutual recognition agreement need among State and local and Federal authorities so that there is just one set of criteria for our companies that they will have to conform to.

The other aspect, though, comes out of recommendation number 1, and that is that we agree that Federal agencies should depend more on the private sector in terms of performing conformity assessment tests or measurements and that the government oversight would come through NIST or some other government recognition of accrediting bodies.

Once those accrediting bodies are recognized, they can accredit the organizations that will then go out and perform the conformity assessment test or measurements.

We think this will save the government a great deal of money and time, and that also, the private sector processes are a very strong and very credible one.

Therefore, we would support some legislation in that regard.

Dr. HUFBAUER. Can I leap back and respond? My colleague John made a very important point. And that is under our present system, there is a strong temptation to have multiple repetition of the Department of Energy, as an example that you gave earlier.

That is a committee of Congress sees some need for some standards in some area and instructs some Federal agency to write those standards.

What Congress has then done and has done very, very often in the past is to create a little czar who basically can tell the private sector, "Take it or leave it, and come crawl to me in terms of these standards." And the military is the worst example of that.

We think an important way around that problem is to elevate NIST, and I know that Belinda Collins probably feels as elevated as she wants to be.

But we want to make them a little higher in the pecking order and that comes to the language you used then because we think the committees of Congress will understand that and will be much less tempted in the future to instruct some agency to write standards and instead they will say, "Hey, NIST it is your baby."

Mrs. MORELLA. Thank you.

Before I introduce Mr. Ehlers, my last question is simply to Dr. Collins. Are there any resources that you need in order to fulfill that kind of institutional framework for NIST?

Dr. COLLINS. Well, I note that your legislation asks for us to study this over the next year. I think we need to study it first.

But I think that we believe that recognizing us as a lead agency to coordinate and facility will help the process of standards and more particularly conformity assessment, because there is not any Federal agency charged with looking at the conformity assessment activity, and it really is far more decentralized, disaggregated and complicated than the standards arena because of the multiple States that are involved, local jurisdictions, Federal jurisdictions and manufacturers.

We are working with ANSI and with ACIL and other private sector people to work toward a conference in October to define what the issues are, to work toward the consensus in specifically laboratory accreditation, so that we come up with some sort of private public entity that might develop, oversee the issues of specifically laboratory accreditation.

My game plan at the moment is to shift resources within my own office, and I can't comment at the moment on whether more resources would be needed.

Mrs. MORELLA. The chair will recognize Mr. Ehlers from Michigan for any questions he may have or comments.

Mr. EHLERS. Thank you very much, Madam Chair.

Mrs. MORELLA. He is probably one of the few people who really understands standards before he even became a member of this committee.

Mr. EHLERS. Thank you.

I am not a member of the subcommittee. I should explain that. That is why I am just popping in. I have another committee hearing in process. I just wanted to stop by because of my interest in this.

I will not belabor the issue.

But I do have one question I would like the reaction of the panelists to, and if it has been covered already, forgive me.

But it is striking to me how we have managed in this country to improve in a lot of areas in terms of units of measurement, and I should say I do have a little familiarity with standards.

It was at one time back when it was the good old National Bureau of Standards. I served on the review council for several years for NBS. We managed to get rid of the furlong as the unit of distance. We managed to get rid of the stone as the unit flight of weight. So we made some progress.

We have gone to a decimal monetary system but not to a decimal-based measurement system. It is creeping gradually, but I think at sometime this nation should adopt a decimal-based metric standard which is called a metric system.

Do you see any hope for that in your dealings with American industry? Certainly with the scientific community there is no problem.

But is there a possibility with American industry? If we have the strong support of industry, I think the Congress might look at it again, in spite of the strong public reaction against it.

Dr. COLLINS. Thank you very much.

I am Belinda Collins from NIST.

This is a question that I get asked frequently. My usual response is the United States is moving towards the metric system inch by inch.

I think those industries whose trading partners force them to deal are using metric units do, in fact, use metric units.

I note that the liquor industry, for example, sells in liter bottles or three-quarters of a liter or 750 milliliters, and I think that where it becomes a trading issue it is happening; in other areas it isn't happening.

I note, though, that all of our trading partners actually are not operating at a fully metric system as yet either.

I was just in England, and their road signs are still in miles. So the world as a whole still has a ways to go. But industry is beginning to recognize the issue.

Mr. EHLERS. England has still not gone to the decimal-based monetary system either. So I wouldn't wait for England to change before we changed.

But the rest of the European community is metric and most of the rest of the world is metric.

Do any other panelists have a comment on that?

Ms. MARASCO. I am Amy Marasco from the American Standards Institute.

And I would just note that more and more often our standard developers when they are developing standards which they hope will become international standards or used internationally are putting conversion tables onto the standards because otherwise they would be very difficult to get them accepted abroad.

So I think we are moving there, but I agree it is going to take industry to come around and really support it.

Mr. EHLERS. Dr. Hufbauer, do you have wisdom to shed on this? What would the reaction be if Congress went ahead and adopted a metric standard?

Dr. HUFBAUER. Congressman, you weren't here when I spoke earlier.

My view is that, and I think I am reflecting here the National Research Council committee's view, that would be inappropriate.

As much as I love the metric standard, and I travel a lot, I use the word anachronistic in that respect.

We have I think a much stronger principle that when the market dictates that certain standards be adopted, the market will respond, as Dr. Collins has said and Ms. Marasco has said.

And so if in some domestic area in terms of mileage signs that people love their old standard or building and they are not feeling the heat from trying to trade in international world, let them go along. And that is fine.

When people start losing money because they have an antiquated standard, they will see the light, and we think that is an appropriate societal or mechanism for responding, however much I personally may love the metric system as I take it you probably do.

Mr. EHLERS. It is not that I love it. I tend not to love inanimate things.

But I am not too worried about the signs on the highways, although I think we should have them in bold so people get accustomed to them.

I don't share your confidence that it will happen when people are losing money. This nation has already lost millions, and I would suggest billions of dollars, by failing to convert in an earlier era, and we continue to lose money because there is such an emotional attachment to the system of units. It is the same as an emotional attachment to a language.

There has been to be a substantial loss before people change. So, in fact, we are losing money and people are simply dismissing it.

I am talking about the manufacturing process, I am talking about the scales of weights, the whole shooting match, and that is where it really costs money.

Mrs. MORELLA. If the gentleman will yield to me, because we have here in the audience Dr. Max Tinsley, who is with U.S. Metric, who is back there.

We also have coming up in our second panel Mr. Rod Lee, who is I think going to address the whole concept of the metric system, too. For some people he is like the Susan B. Anthony.

Mr. EHLERS. Good. I won't delay the hearing anymore.

I just wanted to get the question out there and let people know at least there is one Member interested in it as difficult as it may be to implement it.

I cannot stay for the rest of it, but I can certainly read the transcript when it comes.

Thank you very much.

Mr. TANNER. Madam Chairman, being from Tennessee where we make Jack Daniels whiskey, I want to compliment you on your use of liters and making progress in this area.

Mr. EHLERS. That also told me something about the panel.

Mr. TANNER. Jack Daniels appreciates it.

Mrs. MORELLA. Mr. Elders was a member of the National Bureau of Standards and I was here when the name was changed. The reason the name was changed was no one could understand that standards were important. That is why it was the National Standards and Technology.

I think that is the kind of education that we really need to do with the standards for both medical devices and for everything.

I want to thank the panel very much.

I really appreciate you being here and the discussion and testimony. We will stay in touch.

The second panel will now succeed you. Thank you very much. Thank you very much, gentlemen.

I am going to let you proceed and if you could try for about two minutes or so. We will not penalize you if you go over a little bit but about two minutes so we can some ask questions.

We start off with Mr. Oksala. We want you to know we do get a transcript that goes to every member of the subcommittee subsequent to the hearing so they have an opportunity to read it and we do have opportunities for those working on legislation to discuss it.

I want you to know the other Members who are at other meetings are here in spirit.

## STATEMENT OF STEPHEN P. OKSALA, DIRECTOR, CORPORATE STANDARDS, UNISYS CORPORATION, BLUE BELL, PA

Mr. OKSALA. Thank you, Madam Chair.

I appreciate the opportunity to testify today on behalf of Unisys, a leading information technology products and services company.

The National Research Council's report entitled "Standards, Conformity Assessment and Trade" is an excellent review of the successes and challenges facing the public and private sectors.

In principle, we are in agreement with most of the recommendations made in the report and the theme that a partnership of government and industry is necessary.

Industry leadership in that partnership is both appropriate and necessary, and there is much that can be done to make the current system more effective through greater reliance on industry and less reliance on legislative and regulatory processes.

My written testimony addresses all the recommendations, but I would like to summarize the partnership theme:

Move the standards and conformity assessment infrastructures from the public sector to the private sector, and let the Federal Government concentrate on supporting that process through participation, recognition, harmonization, support in matters affecting international trade, and representation in government-to-government relationships.

More specifically, in standards:

Industry can reduce the cost of government developing standards and provide better standards.

Government can support this improvement in efficiency and effectiveness by recognizing the ANSI process, participating in that process, and paying its fair share of the expense.

I will note that Amy Marasco characterized the Federal Government's payments as something like one-fifth of one percent.

I characterize the entire Federal Government is about the same as my company pays, which hardly seems fair since our revenue is slightly smaller.

In conformity assessment:

Industry can reduce government's size and expense by providing testing accreditation services that are paid for by the users and which meet the needs of the affected parties without duplication.

Government can make this possible by working to eliminate Federal, State and local variations and by negotiating mutual recognition agreements with other governments so that products can be designed once, tested once, and marketed everywhere.

Finally in trade:

Industry can provide products that are competitive in a world market by meeting standards that are internationally accepted and responsive to U.S. designs and ideas.

Government can help us do this by providing expertise and information in other countries and by recognizing the international standards processes.

Thank you, Madam Chair.

Mrs. MORELLA. Thank you very much. That was nice and succinct.

[The prepared statement of Mr. Oksala follows:]

# Testimony to the House Subcommittee on Technology House Committee on Science

## June 29, 1995

**Stephen P. Oksala**
**Director, Corporate Standards & Compliance**
**Unisys**

Thank you, Madam Chairman and members.

I appreciate the opportunity to testify today on behalf of Unisys, a leading information technology products and services company. The information technology and telecommunications business sectors are at the forefront of today's standardization efforts. Without standards, much of what exists today - and much of what is predicted for the future in a global information infrastructure - could not exist. Because of this, Unisys has for many years been a leader in the development and implementation of standards and participates in the key efforts of many standards and standards-related groups at both the national and international levels. Further, the fact that we are members of the Computer Systems Policy Project (CSPP) - and that our CEO, Jim Unruh, chairs this important industry group - illustrates our interest in related policy issues such as interoperability.

The National Research Council's report entitled "Standards, Conformity Assessment and Trade: Into the 21st Century" is an excellent review of the successes and challenges facing the public and private sectors. Standards, and the conformity assessment mechanisms used to assure compliance, are increasingly important factors in commerce at both national and international levels. This is particularly true in the information technology area, where compliance with standards for both hardware and software is essential for market success. It is therefore with great interest that we have reviewed the NRC study and its recommendations.

In principal, we are in agreement with the recommendations made in the report and the theme that **a partnership of government and industry is necessary** if U.S. industry is to be successful in the future. Industry leadership is both appropriate and necessary, and there is much that can be done to make the current system more effective through greater reliance on industry and less reliance on legislative and regulatory processes. But it is equally true that there are activities which only the Federal Government can carry out, and other areas where state or local government responsibilities need to be harmonized to avoid undue problems for industry. We would summarize our beliefs through a "partnership statement" that summarizes the benefits of adopting key recommendations and principles on standards, conformity assessment and trade from the NRC report.

*A Partnership in Standards, Conformity Assessment and Trade*

*Move the standards and conformity assessment infrastructures from the public sector to the private sector, and let the Federal Government concentrate on supporting that process through participation, recognition, harmonization, support in matters affecting international trade, and representation in government to government relationships.*

- *In Standards*
    - *Industry can reduce the cost of government developing standards and provide better standards.*
    - *Government can support this improvement in efficiency and effectiveness by recognizing the ANSI process, participating in that process, and paying its fair share of the expense.*

- *In Conformity Assessment*
    - *Industry can reduce government size and expense by providing testing and accreditation services that are paid for by the users and which meet the needs of the affected parties without duplication.*
    - *Government can make this possible by working to eliminate federal, state and local variations and by negotiating mutual recognition agreements with other governments so that products can be designed once, tested once, and marketed everywhere.*

- *In Trade*
    - *Industry can provide products that are competitive in a world market by meeting standards that are internationally accepted and responsive to U.S. designs and ideas.*
    - *Government can help us do this by providing expertise and information in other countries and by recognizing the ISO and IEC standards process.*

In support of this basic partnership statement we would like to offer additional comments on the specific recommendations from the NRC report as follows.

**Recommendation 1: Congress should provide NIST with a statutory mandate to implement a government-wide policy of phasing out federally operated conformity assessment activities.**
**Recommendation 3: Congress should enact legislation replacing OMB Circular A-119 with a statutory mandate for NIST as the lead U.S. agency for ensuring federal use of standards developed by private, consensus organizations to meet regulatory and procurement needs.**

We agree wholeheartedly with the intent behind these recommendations, which is in essence to move the standards and conformity assessment infrastructures out of the public sector and into the private sector. We believe that this will result in better standards and better products. We also believe that it will result in a more responsive process, reducing the time and cost of developing new products and verifying their compliance with standard requirements. Potential benefits include:

- A more flexible and cost-effective conformity assessment process, with market forces and competence playing a dominant role. Whether to do third party testing or accept a supplier's declaration would be a decision based on the situation at hand rather than on inflexible regulation.

- Elimination of duplicate programs (and consequent duplicate conformity assessment requirements) within the federal establishment.

- The ability for all affected parties to have a voice in the establishment of standards.

- The elimination of Federal bureaucracies to draft and maintain technical documents.

- A shift of cost from the Federal Government to the organizations who want or need standards or conformity assessment services. (Such a shift could be the most effective way of making sure that the service is really required.)

Whether legislation is required and what legislation is required is a matter that requires further investigation. Some agencies work effectively with industry; they utilize private sector standards and contribute to their development, and rely on private sector conformity assessment programs. A notable recent example of this is the proposal by the FCC to streamline the conformity assessment processes for personal computers, which supports their earlier decision to allow conformance to private sector international standards as an alternative to conformance to FCC technical standards. Other agencies seem less enthusiastic about this; recent examples in our industry include proposals by the Department of Energy (with regard to PC energy efficiency) and a proposal by OSHA to require a separate NRTL label for conformance to electrical safety requirements.

Whether due to internal reluctance or existing statutory requirements, not all of the Federal Government seems to embrace the principles of private sector standards and conformity assessment. The idea that NIST (or OMB or anyone else) can significantly change this state of affairs without legislative authority seems problematic; but the nature of that authority is open to debate. At this point in time the best approach would seem to be one where NIST works with the agencies to develop a plan for achieving the desired results, with NIST given the authority to take action if the plan is not forthcoming or is non-responsive.

This would allow NIST to operate on an exception basis, which seems appropriate given the positive actions taking place in many of the agencies. It is critical, however, that Congress make it clear that the Federal Establishment is to transfer, to the extent possible, its standards-making and conformity assessment infrastructures to the private sector.

While supporting the shift to the private sector, we would note that elimination of these infrastructures should not be taken as support for elimination of Federal participation in private sector standardization activities. In addition to mandates government has for protecting the health and safety of the general populace, government is a large purchaser of items which are subject to standardization. Government agencies therefore have an obligation to participate in these processes so that the best interests of the public sector are represented. It is also not meant to eliminate every vestige of Federal interest in conformity assessment; within NIST, for example, the NVCASE program is a good example of something which needs to be maintained to provide government "vetting" of private sector accreditation systems. The NVLAP program on the other hand, which directly accredits laboratories, is an example of a function which could be left to private industry.

Finally, we believe that the shift to private sector standardization further strengthens our belief that the Federal Government should pay its fair share of the cost of the system. ANSI is the umbrella organization for standardization in the U.S., and the Federal Government (as a large procurer of many different products) benefits from the standardization efforts under ANSI. However the total dues for all Federal agencies is approximately the same as those paid by Unisys. A reasonable dues level for each agency, comparable to what companies pay, would be a fair contribution and still keep the costs lower than doing the work inside the government.

**Recommendation 2: NIST should develop a plan to eliminate duplication in state and local criteria for accrediting testing laboratories and product certifiers.**

We also wholeheartedly endorse this recommendation since it can have the effect of doing at the state and local level what Recommendations 1 and 3 propose to do at the Federal level. The problem of duplicate programs across Federal agencies, referenced in the commentary above, can be far worse if each state has its own standards and conformance requirements. Clearly this is a major problem for laboratories, who have to spend time and money getting the appropriate certifications from each of the states and from some counties or cities as well. But it is also a problem for the manufacturers who first must design different or unnecessarily complex products to meet different and possibly conflicting requirements, and then must pay more to the test laboratory (because of their greater costs) or go to multiple laboratories.

We recognize that centralization at the Federal level of state/local functions is counter to recent themes of delegation. However interstate commerce requires consistency, and this recommendation seems to address the appropriate level of shared responsibility by emphasizing mutual recognition as a tool. What specific legislation is needed (if any) needs to be determined, but the intent is clear and correct.

**Recommendation 4: The Director of NIST should initiate formal negotiations toward a memorandum of understanding between NIST and ANSI.**

We agree with this recommendation, and note that NIST and ANSI are currently working to meet this recommendation. We would observe, however, that an initial MOU is not likely to satisfy all of the requirements that we would like to see. The U.S. has a distributed system of standards, and that system has served us well for many years. But there is a downside to that distribution - namely the potential for duplication of efforts and the possibility of having to meet more than one standard. This has been exacerbated in recent times in the information technology industry by the formation of consortia, fora, and other membership organizations whose charter in whole or in part encompasses "standards." Further, these organizations frequently claim to be 'international' standards organizations on the basis that some of their individual or organizational members are based outside the U.S. The result has been significant confusion on everyone's part as to who is a "standards organization" and what legitimacy their output holds. This can have significant effect on U.S. industry because of procurement restrictions as, for example, in the European Union where IT products must meet "standards." It can even impact the deliberations of treaty organizations such as the International Telecommunications Union.

It is our view that it would be eventually desirable for an agreement between the Federal Government and ANSI to be broader than a mutual agreement between NIST and ANSI. One possibility would be a Federal Charter for ANSI, which would provide a legitimacy for those organizations which have been accredited by ANSI; such a designation would be useful to both public and private sector entities in sorting out the standards world on the basis of openness, due process, and elimination of duplication and conflict.

Much has been made in recent times about the "competition" between standards organizations, and there are those who believe that such competition is beneficial. Certainly some competion in development is healthy; but we note that standards developing organizations are supported by industry, and we prefer not to compete with ourselves in order to make sure that we are part of the winning process. Having a recognized structure will go a long way toward ensuring that competition is positive and directed toward the marketplace. The value of a standard is in its singularity; when there are lots of standards for the same thing, their individual and collective values are small. U.S. industry should concentrate on competing in products and services rather than standards.

**Recommendation 5: The USTR should continue ongoing mutual recognition agreement negotiations with the European Union ... with other U.S. trading partners ... conclusion of MRAs on conformity assessment through the Asia Pacific Economic Cooperation forum.**
**Recommendation 6: The USTR should use its authority under Section 301 of the Trade act of 1974.**
**Recommendation 10: The USTR's work should include detailed analysis and monitoring of emerging environmental management systems standards.**

We agree that the USTR can play a pivotal role in the success of U.S. industry in standards-related trade issues. For the information technology industry, international standards are our primary concern because we sell in an international marketplace. Our experience has been that in most cases, the international voluntary standards process works, and U.S. companies have been able to do very well. But there are concerns:

- There are standards committees at the regional or national level establishing standards that are biased toward local producers. The HAR mark on cables in Europe, for example, sometimes cited as a "quality" mark, can only be used on cables produced in Europe.

- Conformity assessment procedures frequently require the use of national or regional test laboratories, limiting competition from U.S. firms. The current system in Europe for quality assessment, for example, requires that the quality assessment according to ISO 9000 be done by a "notified body" - which must be a European organization.

- Intellectual property rights in standards has long been an issue between the "patent rich" U.S. and the rest of the world. Over the last few years, for example, there has been significant controversy over the IPR issues in the European Telecommunications Standards Institute (ETSI). This controversy has been successfully resolved, but it is indicative of the kind of problem that can resurface at any time.

- The Japanese Accreditation Board has recently proposed a scheme for auditing software developers for certification to ISO 9000 quality management systems. This sector-specific scheme (a philosophy rejected in the U.S.) appears to require that Japanese auditors perform the function and could act as a trade barrier to U.S. firms.

Unfortunately there have been and will continue to be instances where national or regional organizations attempt to protect their own industries by using standards and conformity assessment as a tool to prevent U.S. companies from fairly competing. In these cases, the USTR has been a significant help to industry because of its access to the foreign governmental processes which have either initiated or condoned the activity. Clearly the most beneficial result can be mutual recognition agreements such that U.S. manufacturers can design internationally valid products and have them tested (at most) once, in the place of the manufacturer's choosing, for marketing world wide. We applaud the USTR's past efforts in negotiating such agreements and urge them to continue to do so using all the mechanisms at their disposal.

We agree that environmental management standards are a particularly important issue to U.S. industry because of the potential cost (for little return) that could result if the standards are improperly designed and applied. We observe, however, that there are many other standards that fall in this category. This is not to say that we disagree with the recommendation; but we believe that the monitoring of activities needs to take place over the range of markets and standards, reacting wherever unfair practices take place or where government to government agreements are needed.

**Recommendation 7: NIST should develop and fund a program to provide standards assistance in key emerging markets.**

We agree with this recommendation. No matter how active industry is in promoting U.S. standards abroad, many governments and foreign standards bodies are simply unwilling to take "advice" from anyone who does not directly represent another government. This kind of assistance is provided by a number of other countries, and can significantly affect the kinds of requirements which U.S. companies will need to meet. By acting as a representative of U.S. industry and standards developing organizations in this regard, NIST assists U.S. industry without incurring significant cost.

**Recommendation 8: NIST should increase its resources for education and information dissemination to U.S. industry about standards and conformity assessment.**

We agree with the essence of this recommendation, which is to ensure that industry can get essential information about standards and conformity assessment. While standards are critical to the success of U.S. industry, they remain a source of much confusion and misinformation. This is a particular problem for small and medium sized businesses, which typically do not have timely access to critical information on standards and conformity assessment activities in other countries. Frequently these small organizations are not even aware of what they don't have. For this reason, the Federal Government is a logical place for them to go to ask questions, and therefore a logical place to provide a focus for the kinds of information dissemination recommended in the report. This is not to suggest that NIST be the sole provider of such information; other sources such as trade associations can provide the necessary detailed information. But NIST should at least be positioned to provide enough information that a request can be answered or referred just once to another source, and they should be funded to provide this essential "switching" function.

**Recommendation 9: NIST should establish a permanent analytical office with economics expertise to analyze emerging U.S. and international conformity assessment issues.**

The standards world is characterized by an absence of any analytic data; virtually all statements about it or positions on it are based on anecdotal information. In that light it would be useful to have some kind of analysis function. We believe, however, that this would be more appropriate as an adjunct function to other USTR activities and that USTR is the appropriate group to determine the need for and the size of such an office.

Mrs. MORELLA. Thank you very much. That was nice and succinct.

Mr. Ritterbusch.

## STATEMENT OF GERALD H. RITTERBUSCH, MANAGER, PRODUCT SAFETY AND ENVIRONMENTAL CONTROL, CATERPILLAR, INC., PEORIA, IL

Mr. RITTERBUSCH. Thank you very much, Madam Chairman, for the opportunity to provide testimony here at this hearing.

As a member of the NRC committee, of course, I was very deeply involved with this.

I would just like to relate that as we started the meetings our first order of business was we talked about standards, and several of us from industry said that we really need to concentrate more on conformity assessment because that is where we see the problems are really growing because of the complexity of the rules and the various Federal Government agencies adding more conformity assessment programs and states and local governments, as well as most of the other countries, our trading partners.

In fact, there was a question earlier about what about Central Europe, and I put a paragraph in my written testimony relating to that.

In fact, I am leaving here this afternoon. I am on my way to Moscow to deal with conformity assessment issues in Russia for our company. They now have a rule that goes into effect this year which is very complicated from a conformity assessment standpoint.

So that is why we concentrated a lot of effort in the committee on that.

As best I can say as to this conformity assessment is we need the leanest and the most efficient system in the U.S. such that U.S. industry can concentrate on conformity assessment issues outside the U.S.

We don't need problems in our backyard. We need to get everything tidied up here the best we can. That is why we recommended that NIST take the lead in bringing together the Federal agencies to work on this conformity assessment issue.

In the report on page 67 there is a conformity assessment system framework table. I refer you to look at that. I reproduced it as an appendix to my written testimony. If you have that last page, it talks about assessment accreditation and recognition.

What we basically are recommending in the report is that the government agencies let assessment, which is level 1, accreditation level 2 be the private sector domain and step in at the recognition level.

That is where we do absolutely need government support because in dealing with government-to-government issues between Minneapolis and New York, there is no need for them to have separate programs. They can recognize each other and support us, and likewise with the MRAs and the foreign governments.

That is a very important chart, and I recommend that the committee take a very close look at that table because I think that will explain a lot.

With respect to the standard side of it, the standard process is working. All I can echo is the earlier comments that Circular A–119 the principles are right. But it has no teeth in it from the standpoint that it does not compel agencies to participate in the voluntary standards. What we need are some incentives, some teeth, some structure here for the agencies to participate.

The only other point I would like to make deals with recommendation number 7 in the report, and one of the programs that is involved here is the SASO program where NIST has an advisor in Riyadh that is helping U.S. industry deal with some of the standard and conformity assessment programs there.

We think we need to utilize that concept in more countries around the world, possibly a number of the Central European countries and Far Eastern countries. NIST has a program to add more of these during 1995 and 1996, and we certainly encourage that.

Thank you very much for this opportunity.

[The prepared statement of Mr. Ritterbusch follows:]

TESTIMONY OF

GERALD H. RITTERBUSCH

BEFORE

THE

U.S. HOUSE OF REPRESENTATIVES

COMMITTEE ON SCIENCE

SUBCOMMITTEE ON TECHNOLOGY

ON

THE

NATIONAL RESEARCH COUNCIL'S REPORT

ON STANDARDS, CONFORMITY ASSESSMENT, AND TRADE

REGARDING

# "EFFECT OF STANDARDS ON INTERNATIONAL COMPETITION"

JUNE 29, 1995

I would like to thank the Committee for inviting me to provide testimony regarding the "Effect of Standards on International Competition". As Manager of Product Safety and Environmental Control for Caterpillar Inc., Peoria, Illinois, I am involved in standards and conformity assessment. It is my job to ensure that appropriate standards are developed for our products. With regard to conformity assessment I am responsible for ensuring that products are certified as required by the various conformity assessment systems in the market areas in which we offer products. Thus, I am directly involved in day to day problems that manufacturers must deal with in order to be able to sell products.

I appreciated very much the opportunity to serve on the National Research Council Committee which has produced the report on "Standards, Conformity Assessment and Trade into the 21st Century". In order for U.S. industry to be able to market its products into a global market, it must truly understand, and be proactive in the development of standards and conformity assessment processes. Standards that truly represent the technology must be prepared and adopted. The U.S. excels nationally in this aspect and where U.S. participants have really worked in the international arena, have likewise been successful.

Conformity assessment processes have been increasingly imposed by either the marketplace, due to the action of competition, to provide a level playing field, or by government rules in an effort to protect the public or the users of products. While standards and conformity assessment processes can provide a benefit the market and the public, they can also be used as non-tariff trade barrier schemes to protect targeted products, producers, or market areas. For U.S. businesses to succeed, they must have expertise to aggressive work through the process in order to know what requirements exist and how to meet these requirements for market access opportunities.

As we began the NRC study, most of the early emphasis was on the standards issue. This has been the most noticeable aspect, because most people tend to reduce the whole issue of trade competitiveness for getting products into a market as being standard's issue. We felt it was necessary to separate clearly the aspects of standards and conformity assessment. We concluded that it was appropriate to place most of the emphasis on conformity assessment because this is where the real pass, or fails test is in attaining market access. If you are unable to meet the conformity assessment requirements even though products meet the standards, market opportunities are closed.

Conformity assessment schemes across the country and world provide all sort of opportunities for mischief. Inherent aspects of conformity assessment are that product criterion needs to be evaluated. For some product standards there is a limit on the objectiveness of the product data which can be obtained. Thus, when subjective evaluations must be used, the local variants start to enter the process. This opportunity for mischief favors those who know well the process and are able to utilize the local variants. This introduces a trade impediment for those without the necessary resources.

The question that has to be addressed is how to ensure maximum competitiveness for U.S. businesses? The starting point is that the U.S. must provide the most cost effective process for conformity assessment within its borders. That is why in the NRC report we concluded that to improve U.S. business's competitiveness we must start with the situation in the U.S. We concluded that the first place to start was with the Federal Government. As the Federal Government is a major factor on U.S. businesses from both a regulatory and procurement basis, we concluded that substantial first step gains in U.S. competitiveness would be obtained by ensuring that the Federal Government conformity assessment process was efficient and without redundancy and duplication.

Federal Government agencies each have developed full protocols for conformity assessment. They have failed to harmonize the procedures such that U.S. businesses must deal with each agency independently from other agencies. My experience ranges from OSHA to MSHA, to EPA to NHTSA to DOT to the Coast Guard and the GSA. Each of these agencies has very legitimate needs for conformity assessment requirements. The agencies don't share or benchmark with each other to find the best process and then harmonize for accomplishing their needed mission.

The first recommendation of the NRC report recognizes that there is a great opportunity for competitiveness improvement by making the Federal Government conformity assessment protocol more efficient. This is accomplished by better utilizing the private sector for what it can do best and then concentrate government resources into the "recognition" phase of conformity assessment.

There is a very important figure in the NRC report shown on Page 67. It is reproduced as Annex A to this testimony. This figure shows that there are three levels to the conformity assessment protocol. Level 1 is defined as "Assessment". This is the basic process of testing or evaluating products, services or systems for their conformance to the standards.

In order to show that the people or bodies that do this assessment are qualified and that if they fail in their integrity can be disciplined, there is a need for "accreditation" of the people or bodies that do assessment. Thus, Level 2 is defined as "Accreditation". Accreditation has to done on the widest scale possible in order for it to produce commerce favorable economies of scale. With Federal agencies each doing accreditation, we have a multitude of procedures such that assessment bodies must essentially show the same competence, but just for a different agency. This duplicative work simply adds cost without any value.

Accreditation can be fully effectively done by the private sector. Systems already exist and if additional ones are needed can be developed and harmonized under national and international forums for elimination of duplication and redundancy.

The third part of the figure identifies "Recognition". Recognition is a role that is mostly associated with government rules and regulations. Recognition is the ultimate authority in the conformity assessment process. It is the level where "cease and desist" orders can be issued and where misconduct in the accreditation and assessment levels can be corrected. There may be times where the remedial action will need to be performed through criminal punishment administered by governments. That is a function that the private sector can't do and thus must be performed by government.

The NRC report recommendation is that rather than have each agency have their own recognition schemes, NIST would develop a "National Conformity Assessment System Recognition" (NCASR) program for use by all of the Federal Agencies. This would provide the harmonization so that U.S. businesses wouldn't have to deal with a plethora of schemes, but could take advantage of learning how to work with one system. Each agency would still have its appropriate performance requirements for its regulatory and procurement mandates. What would be eliminated are the redundancies of agencies' unique processes for accomplishing the objective for products, goods, or services meeting their performance requirements.

The basis of the NRC report's recommendation for a "NCASR" is the experience with the "National Voluntary Conformity Assessment System Evaluation" (NVCASE). This system was developed by NIST through the public input process several years ago in response to the European concept to develop "Mutual Recognition Agreements" (MRAs) with other countries so as to be responsive to importers into the European Single Market. U.S. businesses support the NVCASE approach as a way to reduce the non-tariff trade barrier effect of European Conformity Assessment Schemes. There is absolutely no reason why the same concept can't work between Federal Agencies. Therefore, a NCASR scheme would have the same effect nationally for Federal Agencies and U.S. businesses as we want to have with foreign trade areas through NVCASE.

The Federal Government isn't the only impediment to U.S. businesses. State and Local governments simply compound the Federal Government inefficiencies many times over for U.S. businesses. Thus, the second recommendation in the report is that there is a need to have State and Local governments also come onboard a system that will reduce the redundancy and duplication in the conformity assessment process. Here is where the concept of "Mutual Recognition Agreements" can effectively work to give the States and Local governments the assurance that products, goods, or services that they either regulate or procure meet their performance requirements. Where either the Federal Government or another State or Local government employs a conformity assessment scheme to validate the performance requirements for a specific product, good or service, the second and following State or Local governments can simply recognize the first government's establishment of a conformity assessment scheme. Those way duplications and redundancies of conformity assessment will be eliminated.

The report recommended that NIST be the agency that will make the system function. An agency or body has to put things in motion to make it happen. NIST has the experience with NVCASE and will have with NCASR and thus expansion of these concepts to the State and Local government areas would be straightforward. In drafting the report it was recognized that the State and Local conformity assessment process are much more complicated and affect substantially more entities and thus it will require much more time to accomplish than Federal Government transition to a recognition operation.

While the report didn't get into the private sector duplication or redundancy in conformity assessment, these also exist. Many companies require some type of conformity assessment from their suppliers. Suppliers generally have a number of customers. Thus, suppliers must meet a number of different conformity assessment schemes from their customers. Work is already being done to reduce these types of redundancies. One which has just recently been introduced is the QS9000 quality system initiative for the automotive industry. This recognizes that there are a number of common suppliers to the Original Equipment Manufacturers. Thus, if a baseline conformity assessment is accepted by an Original Equipment Manufacturer, it will save that OEM cost in conducting a separate conformity assessment with the also attendant cost to the supplier. The secret to make this work has been to get a number of OEMs to agree to an acceptable baseline, sufficiently generic conformity assessment system. In the case of QS9000, the OEMs felt that ISO 9000 wasn't as thorough as needed, and therefore QS9000 was crafted. ISO will be refined in time and will upgrade to meet more of QS9000.

As ISO 9000 becomes more widely applied, other businesses can at least avoid repetition of that part of their conformity assessment schemes and realize the benefit of a generic standard. There will likely be more instances where businesses will partner with suppliers to harmonize the requirements of a conformity assessment to reduce the burden to both the OEMs and the suppliers. Businesses are starting to make the change. Government must do likewise to eradicate any duplication from the conformity assessment process and use the generic aspects of conformity assessment systems to eliminate redundancy. The benefit of action by the Federal Government is that it sets the stage for State, Local and the private sector to multiply the benefits of the concept of a very efficient and effective conformity assessment process.

Since the report was crafted, the situation in Central Europe with the newly independent countries all moving to a market economy, is beginning to show the complexity of conformity assessment systems. Countries such as Russia, Poland, Bulgaria, Czech Republic, Hungary and Solvenia are now requiring that products pass a conformity assessment process. Thus, U.S. businesses continue to devote more resources to the conformity assessment process. The end is not in sight yet on these as additional countries, such as the Mideast and the Far East all have opportunities to use conformity assessment as a mean of non-tariff trade barriers. Thus, it is significant that the U.S. get it own internal conformity assessment processes organized in the most effective and efficient way such that U.S. businesses have the best opportunity for success.

In the international arena, the problem of a foreign country accepting the exporting country's application of the foreign country's conformity assessment system, presents an impediment to trade. One of the concepts that can provide relief is the Mutual Recognition Agreement (MRA) process. The main benefit of this system is that a foreign government acquires assurance that the exporting country's government will assist in ensuring that exporting country's manufacturer will comply with the established standard and conformity assessment requirements. It is unfortunate that we can't generate enough integrity among manufacturers to use properly use manufacturer's declaration of conformity to provide adequate assurance of compliance with the importing country's requirements. Where countries just can't see their way to accepting manufacturer's declaration of conformity, we need to have in place in the U.S. a process for MRAs. Therefore, recommendation five of the NRC report recognizes that we must make further use of the MRA process to enhance U.S. export trade.

Conformity assessment is truly the aspect of trade and commerce which needs concerted action to make it as efficient as it can be. That is not to state that the standards development process is the best it can be. The NRC report addressed the issue of getting more involvement of government agencies into the private sector led standards development process. It is important that staff from government agencies participate in the standards development process. We have found from the private sector that much is gained in the use of standards when the staff are active in the development of standards. This is aside from the value of having government agency staff bring their contributions to the process. Therefore recommendation three of the report deals with finding a better way to get government agency staff to participate in the voluntary standards development process. The current OMB Circular A-119 is too weak to really accomplish the needed goal. Thus, there needs to be more push from Congress to get the agencies to really become an effective partner with the private sector in having a standards development process which contains private and government sector staff for development and then both the private and government sectors to make use of the standards.

The standards development process takes funding to keep it viable. Government should also contribute to the cost of the process. It costs to have meeting rooms. It costs to distribute documents. There are a number of basic costs to keep the process in operation. Government should thus be contributing to the cost of its operation just as the private sector entities do. We simply need from the private sector and the government adequate funding for the operation of the voluntary system.

In the standards development process there is need for better management of it. As U.S. businesses truly embrace Strategic Standardization, they will recognize that it is no longer possible to just let the standards development process be trusted to a few dedicated individuals in the company standard's department. Standards go to the very heart of the business and can be use strategically for the success of the business. This is particularly true in the international arena where the development of the right standard or the work to prevent a bad standard from be adopted is very significant for a business. Company management needs to recognize that the standards development process is strategic to the long-term success of the business. Where management has recognized this and become active, all of the problems which have been recorded in history whither. Where appropriate management guidance has been brought into the Standards Development Organizations (SDOs), the work gets done in a business-like fashion to produce the needed results.

Again, government agencies also need to be involved with the management of the SDOs. They can bring the perspective of what the government agencies need in the way of standards. Thus, government agencies need to bring a package to the standards development process of staffers to participate in the actual standards development as well as management staff for the management of the SDOs.

We need a strong national standards development process in the U.S. for both our domestic needs and to provide a platform for work in the international arena. Without bringing our best standards technology and techniques to the national process we will not be as effective as is necessary in the international arena. Ensuring that internationally developed standards are technologically valid and are developed in a consensus process is a challenge for U.S. participants. With private sector and government agency staff working together as an effective partnership in the international arena, the U.S. can have the most effective voice in the international arena.

Thus, as regards the standards development process, the private sector is taking a much more progressive stance with respect to making the process work through having the right people participate in the standards development as well as providing management talent to the SDOs to ensure that they are working in concert with the objectives of businesses. It is simply necessary for government to do the same in order for the U.S. to excel in the use of standards in trade and commerce.

The standards development situation in foreign countries differs widely. Many of the developing countries are just getting active in the standards development process. There is a good opportunity to influence how they come on stream with standards. Other developed countries have recognized this aspect and are providing assistance to the developing countries. The U.S. also needs to be there in those developing countries and work to ensure that the U.S. concerns are not overlooked. The efforts need to be directed to harmonizing the standards around the international standards. Developing countries sometimes feel that they have unique requirements that dictate unique standards which then quickly become non-tariff trade barriers. If the staff in the developing countries really have the full picture of information on the matter being covered in the standard, they will recognize that their situation isn't as unique as they think it is. As a result they will be more likely to not invent a unique solution for their country that will hinder the ability of the U.S. to trade with them. Thus, recommendation seven of the NRC report is a very realistic opportunity for the U.S. to enhance its trade position with a number of countries.

In order to enhance the U.S. trade picture, it is necessary that other countries don't use standards and conformity assessment systems as a non-tariff trade barrier. There will be times when just talking may not be sufficient to get a foreign country to understand the need for cooperation. In those circumstances, it will be necessary to effectively present the message. Thus, there will be times that trade sanctions will be an appropriate response. Recommendation six deals with this aspect. This must be used sparingly to make it effective. Never-the-less it must be used once we recognize that a foreign government is intend on using either standards or conformity assessment processes to thwart U.S. trade.

## Summary

By applying the recommendations of the NRC report, the U.S. can make significant process to ensure that its domestic conformity assessment process is not an excessive burden on the economy. That is significant in giving the U.S. a comparative advantage in the international arena. Therefore, application of the recommendations in the NRC report on conformity assessment is a priority.

For standards, we just need the government agencies to be more active in the process which exists. They will benefit by getting standards which they can use for both procurement and regulatory means. Their staffs have valuable input to the process and they can also learn from the association in the process. Government agency management staffs also need to take an active part in the management of the SDOs. They need to work with the SDOs such that government needs for standards are also adequately addressed.

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# CONFORMITY ASSESSMENT SYSTEM FRAMEWORK

| | | THIRD - PARTY ACTIVITIES | | |
|---|---|---|---|---|
| | **Manufacturer's Declaration of Conformity** | **Product Testing** | **Product Certification** | **Manufacturing Process: Quality System Registration** |
| Page 8 **LEVEL 1:**<br>**ASSESSMENT** | Manufacturer's own testing and quality assurance<br>BY: manufacturer | Testing of products, components, materials, etc.<br>BY: independent laboratory | Certification of products against a standard or set of standards<br>By: product certifier | Audit and registration of manufacturer's quality assurance system (e.g., against ISO 9000 standards)<br>BY: quality system registrar |
| **LEVEL 2:**<br>**ACCREDITATION** | Acceptance<br>BY: customer or regulatory authority | Accreditation of laboratory's competence<br>BY: laboratory accreditation program (private or government) | Accreditation of certifier<br>BY: certifier accreditation program (private or government) | Accreditation of quality system registrar<br>BY: registrar accreditation program (private or government) |
| **LEVEL 3:**<br>**RECOGNITION** | Acceptance<br>BY: customer or regulatory authority | Official recognition of laboratory accreditation program<br>BY: government* | Official recognition of certifier accreditation program<br>BY: government* | Official recognition of registrar accreditation program<br>BY: government* |

*Government recognition programs are in very early stages of development.

Mrs. MORELLA. Thank you very much, Mr. Ritterbusch.

Dr. Dixon, we are delighted to hear from you.

### STATEMENT OF DR. LOUIS T. DIXON, AUTOMOTIVE SAFETY AND ENGINEERING STANDARDS, FORD MOTOR CO., DEARBORN, MI

Dr. DIXON. Good morning, Madam Chairman and others. Thank you for the opportunity to present our testimony on behalf of standards and conformity assessment.

Ford is the world's largest producer of trucks and the second largest producer of trucks and cars combined, with manufacturing, assembly and sales affiliates in 34 countries.

Ford is also engaged in a number of other businesses, including electronics, glass, electrical and fuel handling products, plastics, climate control systems, and automotive service and replacement parts.

I bring this to your attention to let you know that we are indeed a multinational company, and in my written report I have described our transition from multinational to global where we are not independent in each country that we operate now. We operate as one unit throughout the world.

We are particularly glad that the committee is addressing standards and conformity assessment. These matters are critical for engineering, manufacturing and marketing products in local, national and international markets.

We compliment the study team on their thorough assistance and comprehensive treatment of standards and conformity assessment and their impact on trade.

I would like to highlight certain areas and recommendations we believe to be most critical.

In the area of standards, we support recommendation 3 which would strengthen public sector use of consensus standards, and recommendation 7 which would improve U.S. involvement in international standards development.

Public sector participation in standards development will facilitate the incorporation of U.S. interests.

In the area of conformity assessment, we support recommendations 1 and 2 which together would serve to streamline the U.S. conformity assessment system.

Recommendation 1 sets the stage for the recognition role of a government agency, a role more appropriate for government than the assessment or accreditation roles.

Recommendation 2 deals with the issues of redundant accreditation and duplication of efforts. Both issues result in significant cost to manufacturers.

We are affected by these activities as customers and as suppliers. We are, therefore, particularly interested in efficient conformity assessment at all levels, and by that I refer to the table that Mr. Ritterbusch mentioned earlier.

Where product or quality systems certification are required, certifications should be based on one assessment from one location and should be acceptable anywhere in the world, if applicable. There are many opportunities for improvement in this area.

Thank you for your interest and involvement in this matter and for the opportunity to present our perspective.

[The prepared statement of Dr. Dixon follows:]

Testimony by
Louis T. Dixon, Ph.D.
Manager, External, Subsystem and Component Standards
Automotive Safety and Engineering Standards
Ford Motor Company
on
"Effects of Standards on International Competition"
before the U.S. House of Representatives Committee on Science
Subcommittee on Technology
June 29, 1995

The subject of standards has, traditionally, not been one that generates excitement. Rather, standards have been regarded as a "ho-hum" subject, lagging technology and presenting barriers to innovation. It is gratifying to see that there is heightened interest in this subject and that there is now more recognition of the importance of standards especially in the arena of international trade.

Ford Motor Company is the world's largest producer of trucks and second largest producer of cars and trucks combined. It is also one of the largest providers of financial services in the world. Ford has manufacturing, assembly, or sales affiliates in 34 countries. In 1994 Ford companies employed approximately 337,800 people worldwide. Ford is also engaged in a number of other business including electronics, glass, electrical and fuel handling products, plastics, climate control systems, automotive service and replacements parts, vehicle rental and land development.

The world's business environment is changing and we must change with it. One major change is the movement toward freer trade around the world. The competitive playing field is larger and more open than its ever been before. Ford and other U.S. companies are facing increasing global competition from the best companies in the world wherever they are located and wherever they operate.

On January 1, 1995, Ford Automotive Operations began doing business as a single organization globally . We did this to become leaner, faster, and more competitive so that we can provide the greatest value to our customers and shareholders. Instead of organizing by geography we have organized our global automotive business by product line. We are in transition from a multinational business to a global business. Over the last ten years we have been evolving to manage our business globally making the best use of our resources on a worldwide basis. Our goal is to lead in quality, customer satisfaction, product excellence and best business practices.

We are particularly glad the Committee is addressing Standards and Conformity Assessment. These matters are critical for engineering, manufacturing, and marketing of products and in local, national and international trade.

Standards are essential tools for our business. We use them to:

- Deploy product quality and performance policies
- Unify global markets and operations
- Meet societal goals
- Connect hardware and engineering processes
- Attain volume efficiency through commodity buying
- Institutionalize corporate memory

We contribute to the development of industry, national and international standards, because they are necessary for our business. We support standards-developing organizations such as the American National Standards Institute (ANSI), the Society of Automotive Engineers (SAE), the American Society for Testing and Materials (ASTM), through participation on governance and operating Boards and on Technical Committees.

Conformity assessment interpretation and implementation is also important to our business. We participate are affected by these activities as customers and as suppliers. As customers, we need assurance regarding the materials, components and services we procure. As suppliers we need to provide assurance to users of our products. We are therefore particularly interested in efficiency of conformity assessment at all levels:

1. Assessment - the evaluation of products, processes, services and management systems
   We see this as the basis for assuring conformity to standards. The evaluations should not be restricted to the results of manufacturing processes (as in testing of products at the end of the line). Major efficiencies and improvements in quality are achievable by assuring that the process is in control.

2. Accreditation - assuring competence of those who do assessments
   We believe that there is a place for acceptance of manufacturers' declaration of conformity as well as third party activities at this level. Conformance to management system standards helps to support the former.

3. Recognition - attesting to the competence of accreditation programs
   This level is especially critical to international commerce in that it should provide assurance of competent conformity assessment programs among the affected countries.

We subscribe to the principle that where product or quality system certifications are required, certification should be based on one assessment from one location and should be acceptable anywhere in the world if applicable. In order to achieve this goal we in the U.S. need to "get our house in order". It is indeed incongruous that we can find laboratories which must be accredited by several Federal Government agencies, State/Local agencies, as well as private sector accreditors in order to have the equivalent or related test results accepted by these multiple groups of customers.

## Comments on the National Research Council (NRC) Study Recommendations

We **compliment** the study team on their thorough assessments and comprehensive treatment of Conformity Assessment and its impact on trade. We recognize that there are issues and opportunities for improvement in the U.S. conformity assessment processes. We support most of the recommendations of the NRC report and offer the following specific comments:

*RECOMMENDATION 1: Congress should provide the National Institute of Standards and Technology (NIST) with a statutory mandate to implement a government-wide policy of phasing out federally operated conformity assessment activities.*

*NIST should develop and implement a National Conformity and Assessment System Recognition (NCASR) program. This program should recognize accreditors of (a) testing laboratories, (b) product certifiers, and (c) quality system registrars. By the year 2000 the government should rely on private section conformity assessment services recognized as competent by NIST.*

We support this recommendation in principle. It sets the stage for the RECOGNITION role of a government agency. Our emphasis is on Recognition, a role more appropriate for the government than Assessment or Accreditation.

I may be presumptious here, but suggest that, if only to help with pronunciation of the inevitable acronym, the title of the proposed program be changed to the National Conformity Assessment Recognition System (NCARS) program.

*RECOMMENDATION 2: NIST should develop, within one year, a ten-year strategic plan to eliminate duplication in state and local criteria for accrediting laboratories and product certifiers. NIST should lead efforts to build a network of mutual recognition agreements among federal, state, and local authorities.*

*After 10 years, the Secretary of Commerce should work with federal regulatory agencies to eliminate remaining duplication through preemption of state and local conformity assessment regulation.*

We support this recommendation. There are a growing number of conformity assessment standards and regulations, and concurrently, an increase in the number of accreditation activities in the public as well as the private sector. The issues we face include redundant accreditation and duplication of efforts resulting in significant costs to manufacturers. Through participation on a NIST, ANSI and ACIL work group on this issue, we are contributing to the search for acceptable solutions.

*RECOMMENDATION 3: Congress should enact legislation replacing OMB Circular A-119 with a statutory mandate for NIST as the lead U.S. agency for ensuring federal use of standards developed by private, consensus organizations to meet regulatory and procurement needs.*

We support this recommendation in the belief that legislation would be more binding for the various federal agencies. We are aware that some agencies are implementing the direction of OMB Circular A-113 and are facilitating the use of consensus industry standards by cooperating with standards development organizations in the development of these standards.

We believe there are opportunities for greater and more consistent participation in consensus standards development from government agencies. Everyone (public and private sector) benefits from pooled technical expertise and elimination of redundant, duplicate standards. In the auto industry we are promoting this approach to improve our global competitiveness and timing.

*RECOMMENDATION 4: The Director of NIST should initiate formal negotiations toward a memorandum of understanding (MOU) between NIST and the American National Standards Institute (ANSI). The MOU should outline modes of cooperation and division of responsibility between (1) ANSI, as the organizer and accreditor of the U.S. voluntary consensus standards system and the U.S. representative to international, non-treaty standards-setting organizations; and (2) NIST, as the coordinator of federal use of consensus standards and recognizing authority for federal use of private conformity assessment services. NIST should not be precluded from negotiating MOUs with other national standards organizations.*

*In addition, all federal regulatory and procurement agencies should become dues paying members of ANSI. Dues will support government's fair share of ANSI's infrastructure expenses.*

We support this recommendation recognizing that it is already being implemented. We see an MOU as an instrument to clarify roles and responsibilities and lay the foundation for public and private sector partnership in the conformity assessment arena.

*RECOMMENDATION 5: The Office of the U.S. Trade Representative should continue ongoing mutual recognition agreement negotiations with the European Union. The USTR should also expand efforts to negotiate MRAs with other U.S. trading partners in markets and product sectors that represent significant U.S. export opportunities. Priority should be given to conclusion of MRAs for conformity assessment through the Asia Pacific Economic Cooperation forum.*

We support this recommendation in that it will contribute to our vision of certification based on one assessment from one location that is acceptable anywhere in the world.

*RECOMMENDATION 6: The USTR should use its authority under Section 301 of the Trade Act of 1974 to self-initiate retaliatory actions against foreign trade practices involving discriminatory or unreasonable standards and conformity assessment criteria. In particular, if the U.S. - EU negotiations do not succeed within two years in securing fair access for U.S. exporters to European conformity assessment mechanisms, the USTR should initiate retaliatory actions under Section 301.*

Section 301 represents an important authority under U.S. laws for pursuing retaliatory measures against countries that discriminate against U.S. companies. In general, we support the use of 301 action when absolutely necessary to open markets to U.S. companies.

*RECOMMENDATION 7: NIST should develop and fund a program to provide standards assistance in key emerging markets. The program should have four functions:*

*(a) provide technical assistance, including training of host-country standards officials, in building institutional mechanisms to comply with the Agreement on Technical Barriers to Trade under the Uruguay Round of the GATT;*

*(b) convey technical advice from U.S. industry, standards developer, testing and certification organizations, and government agencies to standards authorities in host countries;*

*(c) assist U.S. private-sector organizations in organizing special delegations to conduct technical assistance programs, such as seminars and work-shops; and*

*(d) report to the export promotions agencies of the Department of Commerce (such as the U.S. and Foreign Commercial Service) and the USTR regarding standards and conformity assessment issues affecting U.S. exports.*

We support this recommendation. It will contribute to mutually acceptable conformity assessment solutions through international standards and strengthen the U.S. position in emerging markets.

*RECOMMENDATION 8: NIST should increase its resources for education and information dissemination to U.S. industry about standards and conformity assessments. NIST should develop programs focusing on product acceptance in domestic and foreign markets. These efforts should include both print and electronic information dissemination, as well as seminars, work-shops, and other outreach efforts. Programs should be conducted both by NIST staff and by private organizations with NIST cooperation and funding.*

We support this recommendation. Education and information dissemination is fundamental to progress. This approach should be cooperative with the private sector through ANSI, to assure that programs are supportive and not redundant.

*RECOMMENDATION 9: NIST should establish a permanent analytical office with economics expertise to analyze emerging U.S. and international conformity and assessment issues. The office should evaluate and quantify the cost to U.S. industry and consumers of duplicative conformity assessments requirements of federal, state, and local agencies. To support the work of the USTR and other federal agencies, including those involved in export promotion, it should also collect, analyze, and report data on the effects of foreign conformity assessment systems and regulations on U.S. trade.*

We offer a modification to this recommendation to target the same intent. We believe that NIST and ANSI should cooperate in this area bringing public and private sector perspectives to bear on U.S and international conformity assessment issues. We see other recommendations (e.g. Number 2) addressing the issue of duplicative conformity assessment cost.

*RECOMMENDATION 10: The USTR's post-Uruguay Round trade agenda, including work through the World Trade Organizations, should include detailed analysis and monitoring of emerging environmental management system standards and their potential effects on U.S. exports. Technical assistance should be provided to USTR by NIST.*

We support this recommendation with the condition that it includes all emerging management system standards (Occupational Health, Personnel etc.)

In closing, I thank the Committee for their interest and involvement in this matter, and for the opportunity to present our perspective.

Mrs. MORELLA. Thank you very much, Dr. Dixon.

From the earliest time, I have driven and I drive a Ford. I know you are multinational and all over the world with plastics and engineering and all. But I still have my Mustang.

Mr. Poggi.

## STATEMENT OF WALTER A. POGGI, ACIL, PRESIDENT, RETLIF TESTING LABORATORIES, RONKONKOMA, NY

Mr. POGGI. Thank you, Madam Chairman.

I am President of Retlif Testing Laboratories, which is a 16-year old multidisciplined, multilocation conformity assessment laboratory. Retlif is a small business with 25 employees and sales of $2 million a year, quite a difference from Ford.

My 13-year involvement in ACIL and my 8-year involvement in international conformity assessment activities resulted in me becoming a federally appointed member of the current U.S. Department of Commerce trade negotiating team negotiating the mutual recognition agreements with the EC that are defined in my written testimony.

It is from this experience that I draw on my comments which I will make today.

First, on behalf of the ACIL, formerly the American Council of Independent Laboratories, I would offer the following statement:

ACIL, the trade association representing U.S. third-party taxpaying testing and certifying businesses, strongly supports the spirit and direction of recommendation 1 of the NRC report.

For the past 10 years, ACIL has petitioned for some means of coordinating the U.S. accreditation schemes. We believe something like the NCASR body that is proposed by NRC could meet this need.

ACIL urges Congressional support of this concept and pledges to continue to work with other organizations of like mind to promote the establishment of such a regulation body.

That being said, it does not say that I as a small business man endorse the NRC recommendations without exception and as strongly.

Recommendation number 1, although well meaning, is unrealistic and not practical. The assumption that each and every Federal agency should divest itself of any and all conformity assessment activities is counter to most international activities, potentially damaging to U.S. Small business and undesirable both from a consumer and workplace safety viewpoint.

Most emerging international systems such as that of the European Community maintain government control over the areas of health, workplace and consumer safety.

Accordingly, to ask Federal agencies such as FDA, EPA, OSHA and the FCC to totally dismantle their current conformity assessment activities is unrealistic and counter to the international trend.

Also, an issue in this area is government guarantees with most international trading partners mandating them in many areas of conformity assessment.

In my area of EMC and telecommunications testing, which is currently accredited by a Federal program, the NVLAP program of

NIST, privatizing would then mandate Federal approval of that private sector program resulting in yet another layer of cost to me.

Further, in a private sector program, my right as a small business to petition to address a grievance and other due process issues may be seriously curtailed as compared to the Federal program I am currently in.

With regards to recommendations 3 and 4, I do believe that there are problems with the standards development process in this country. It is a lengthy, costly process which by virtue of the cost discriminates against small business. My written testimony addresses this in greater detail.

Recommendation number 4 is also of concern in that any exclusive partnership between government and a private sector entity without proper government oversight powers is a concern to small business.

The NRC's study focused on a serious problem and for that it should be commended. However, it should be viewed as a start, not the finish, and clearly future study is needed.

As a minimum, the future study must give particular attention to the needs of small business and the desires of our international trading partners.

Thank you, Madam Chairwoman.

[The prepared statement of Mr. Poggi follows:]

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# TESTIMONY OF
# WALTER A. POGGI

ON BEHALF OF

RETLIF TESTING LABORATORIES

BEFORE THE

SUBCOMMITTEE ON TECHNOLOGY

COMMITTEE ON SCIENCE

U.S. HOUSE OF REPRESENTATIVES

ON

THE NATIONAL RESEARCH COUNCIL'S REPORT

STANDARDS, CONFORMITY ASSESSMENT AND TRADE

JUNE 29, 1995

I present these comments as president of **RETLIF TESTING LABORATORIES** in order to express the opinions and concerns of my organizations with regards to the National Research Council's report "Standards, Conformity Assessment and Trade".

**RETLIF TESTING LABORATORIES** is a 16 year old conformity assessment testing laboratory specializing in EMC, Telecommunications and Environmental Simulation testing services for both commercial and military sector manufacturers. We currently maintain two locations, our headquarters, in Ronkonkoma, Long Island, New York and a branch facility in Manchester, New Hampshire. **RETLIF TESTING LABORATORIES** is a small business with 25 employees and sales of 2 million dollars per year.

Because of the direct impact that all conformity assessment issues have on my business, I have remained an active participant in many related industry associations. I am a member of the American National Standards Institute (ANSI), the American Electronics Association (AEA), the Society of Automotive Engineers (SAE), the Institute of Electrical and Electronic Engineers (IEEE) and the ACIL (Formally the American Council of Independent Laboratories). Clearly my greatest involvement has been within ACIL where my involvements include past chairman of the Eastern Division, past chairman of the Government Relations Committee, a post I held for six years, and currently vice chairman of both the Government Relations Committee and the Conformity Assessment Section. I was also the ACIL's 1994 Roger S. Trusdail award recipient for outstanding service to the independent testing community.

Based on my experience and involvement in both national and international conformity assessment activities, I have chaired the

1992 ACIL/AEA/NIST EMC European Community Workshop, currently chair the U.S. Dept. of Commerce's EMC/Telecom/EC Sectoral Advisory Committee and currently act as the **"Federally Appointed"** EMC expert on the U.S.T.R./Dept. of Commerce trade team negotiation Mutual Recognition Agreements with the European Community.

## GENERAL COMMENTS

The NRC study was needed and has served a purpose in beginning to define the problems within the American conformity assessment system. It should be viewed as an excellent start and should form the fine basis for a broader range study of the problem. The negatives of the study are that it sets unrealistic goals, did not properly focus on international trends in conformity assessment activities and proposes actions which may negatively impact small business.

## CONFORMITY ASSESSMENT

### RECOMMENDATION #1

Although I do support the concept that private sector entities should be more involved in conformity assessment activities, the concept of mandating phasing out all federally operated conformity assessment activities is unrealistic, counter to current international activities, additive in cost, and potentially damaging to small business and workplace and consumer safety.

It is true that in many cases worldwide, private sector organizations are performing more and more conformity assessment activites, however at the same time where a genuine governmental interest is present, i.e. public health and safety, governments have assumed greater responsibilities. The European Community (EC) is a good example of this where simple devices such as toys are governed by "directives" which allow a manufacturer to "self-declare" compliance with the regulations, where the directive covering high risk Medical Devices required testing and quality system auditing by government approved Notified Bodies and Quality System Registrars. Based on knowledge, experience and independence it would appear that federal agencies such as FDA, OSHA, EPA and the FCC should still stay in the "conformity assessment business" both to protect the interest of U.S. consumers and workers and to interface with their international colleagues.

If we continue to review such international activities we can see how elimination of all current federal conformity assessment programs can result in additional costs to companies such as my own. As an active participant in the five rounds of trade talks we have had to date with the EC related to Mutual Recognition Agreements, I can assure you that in many, if not all cases, the Europeans are looking for "government guarantees" to conformity assessment activities done here. If we look at the current NIST NVLAP EMC program which my company is currently accredited by, we find it to be "totally" acceptable to the Europeans because it is government run. If we now take that program and move it into the private sector, it would need some form of "government recognition" to meet the European's requirements. (i.e. governmental accreditation of the private sector accreditor) That would then add an additional layer of activity (cost) which I as the final entity approved would have to pay for.

Another area of concern to small business when we apeak of privatizing government programs, is "Will I have the same right to petition?". Most of the organizations which are interested in assuming many of the current governmental roles are major trade and standards associations which by and large are controlled by big business. This is not a criticism of them, it is merely a statement of fact. Big companies pay large amounts of dues and have the manpower to support many association activities. Accordingly who would we in small business turn to when we have a grievance.

To best describe my opinion, I would say, "One size does not fit all!". Privatization of selective government programs, yes, blanket privatization, no.

RECOMMENDATION #2

I totally support the concept, however seriously disagree with the timeframe. The problem of multiple federal, state and local accreditation programs is an extremely complex one which is deep seated in states-rights and other issues. To say a plan to resolve this problem can be defined in one year, is in my opinion, underestimating the scope of the problem. The goal of the recommendation is excellent, however let us commit the proper time and efforts initially so that this goal can be achieved.

## STANDARDS DEVELOPMENT

I do not share the basic assumption of the NRC's study that the current U.S. standards development system serves the national interest well. I clearly believe there is considerable room for improvement. The basic problem is that the current system results in a lengthy process with is costly both in manpower and money. We at RETLIF have supported many standards writing activities for such bodies as ANSI, SAE and IEEE. And although there are always exceptions, most activities have taken in excess of four or five years to complete. Some activities have taken as long as 10 years with no standard yet completed! Based on this condition it is easy to see why most standards writing activities in this country are dominated by large businesses who have the time and money to support such prolong processes. I should point out that with the ongoing development of the European Community, their need for new standards have been significant and they have risen to the challenge. If we review their new telecommunication standards (Common Technical Requirements) we can see that the average turnaround time from start to release for such standards have been 18 to 24 months.

## RECOMMENDATION #3

Here too, the concept is fine however the thought of "mandating" is again a concern. Are we going to be trying to fit round pegs in square holes because we have to use what the private sector has developed. From a military viewpoint, will we always be able to wait the 3 or 4 or 5 years it may take to develop a new standard. Further if we are going to strengthen A-119 related to standards, why don't we write a new Circular which would address accreditation and attempted to direct the use of existing accreditations rather than always developing new ones.

RECOMMENDATION #4

I found it a bit surprising that one association, in this case ANSI, was singled out for a MOU with NIST. I realize that the option for others were mentioned but not specified. The thought of an exclusive relationship with one entity is of some concern, however what is of greater concern is the oversight. As was mentioned prior, as a small business, we at RETLIF would be concerned as to our right to petition any private sector body which was performing what was previous government assessment activities. Accordingly, it would be desireable that should such exclusive relationships be developed, that some form of congressional oversight be a part of that relationship.

INTERNATIONAL TRADE
RECOMMENDATIONS #5, 6 & 7

Based on my involvement in the ongoing U.S./E.C. MRA talks, I support all three recommendations related to international trade. This especially true of Recommendation #6 which can many times be the motivation for progress in trade talks.

Beyond these recommendations, I believe it is important that we as a country understand and respect the conformity assessment systems that our trading partners put into place. As I mentioned prior, governments around the world are looking for forms of government guarantees and we should respect that concern and make certain that our overall national conformity assessment system addresses that concern. It may mean maintaining some existing government conformity assessment activities and if so, so be it. I would caution against a "gunboat diplomacy" approach to conformity assessment in which we try and force down on our trading partners a system which may suit our national manufacturing interests fine but is counter to most international systems.

## ADDRESSING FUTURE CHALLENGES AND OPPORTUNITIES
## RECOMMENDATIONS 8, 9, & 10

These recommendations addressing education, information dissemination, economic analysis and the monitoring of emerging environmental management systems are all issues and areas which require our support and commitment. The amount of "mis-information" that is usually present within the U.S. manufacturing sector concerning foreign market conformity assessment requirements is sometimes staggering. Further it would be extremely helpful to understand the economic impact of emerging conformity assessment systems worldwide prior to our negotiating with them.

## CONCLUSION

The National Research Council should be commended for the efforts it has put forth in developing this study. Clearly the many issues involved are complex with either extremely difficult or at this point even undefined solutions. This study should be used as a basis, as a starting point for discussions, as a catalyst for action. Something must be done to address this problem and although it is clear that we may not agree on the solution we must agree to begin to work together for a solution.

I thank the Subcommittee on Technology and its Chairwoman, the Honorable Constance A. Morella for conducting these hearings and for allowing me to testify at them. If I can be of any additional assistance to the Subcommittee please do not hesitate to contact my office.

Respectfully Submitted By:

Walter A. Poggi
President
**RETLIF TESTING LABORATORIES**

Mrs. MORELLA. Thank you very much, Mr. Poggi.

And now, Mr. Lee.

## STATEMENT OF ROD LEE, SENIOR VICE PRESIDENT, LITHONIA LIGHTING, CONYERS, GA

Mr. LEE. Madam Chairman, and members of the committee, I am here today to present the views of the lighting equipment members of NEMA as they relate to the Federal Government's role in voluntary standards development.

NEMA develops standards for various electrical products and also participates on numerous national and international committees that work through consensus based procedures to develop standards or to harmonize existing standards.

The lighting fixture industry has and does support the Federal Government's use of voluntary consensus standards.

I would like here to describe a specific example of a government agency mandating policy that runs counter to the adoption of voluntary consensus standards.

Agencies such as the General Services Administration are mandating that recessed lighting equipment be provided in modular, metric increments also known as hard metric dimensions. The most common recessed lighting fixtures used today for private and private sector buildings are 2-foot by 4-foot dimensions. This fixture size is the de facto industry standard.

The large mainline fixture manufacturers that are the principal suppliers of these standard-sized fixtures have made major investments in tooling and automation to apply the economies of scale in reducing costs.

Manufacturers cannot produce hard metric fixtures using current standardized tooling. The investments required to retool to produce hard metric fixtures simply would not be justified on the basis of Federal building construction alone, which would result in higher unit cost for fixtures required under the Federal guidelines.

GSA has argued that industrywide adoption of hard metric standards will make the lighting fixture industry more competitive internationally. We disagree with this premise.

In summary, NEMA supports the use of the metric system of measurement. The lighting fixture industry is ready and able to provide plans, specifications and other documentation in soft metric form for Federal projects.

We do not, however, believe there is any value to the industry or to the national economy in requiring nonstandard equipment for Federal buildings.

Thank you for the opportunity to testify.

[The prepared statement of Mr. Lee follows:]

NEMA

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# STATEMENT OF

# THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

SUBMITTED BY

ROD LEE

SENIOR VICE PRESIDENT, MARKETING

LITHONIA LIGHTING

CONYERS, GEORGIA

TO THE

SUBCOMMITTEE ON TECHNOLOGY

COMMITTEE ON SCIENCE

U.S. HOUSE OF REPRESENTATIVES

FOR THE JUNE 29, 1995 HEARING ON

THE EFFECT OF STANDARDS

ON INTERNATIONAL COMPETITION

Written Statement of

Rod Lee

Senior Vice President, Marketing

Lithonia Lighting, Inc.

for the

National Electrical Manufacturers Association

Madam Chairman, my name is Rod Lee, and I am the Senior Vice President of Marketing for Lithonia Lighting, headquartered in Conyers, Georgia. Lithonia Lighting is a lighting fixture manufacturer employing over 4,000 people in the U.S. and is a member of the National Electrical Manufacturers Association (NEMA). NEMA represents over 550 U.S. electroindustry companies that manufacture products used in the generation, transmission, distribution, control, and end-use of electricity. NEMA member companies serve a domestic market of nearly $100 billion, export $18 billion, and employ 500,000 people.

In this statement, I will present the views of NEMA member companies in the lighting fixture industry. Our manufacturers produce over 85 percent of the recessed fluorescent lighting fixtures sold in the United States. We appreciate the opportunity to testify on the National Research Council's report entitled Standards, Conformity Assessment, and Trade Into the 21st Century as it relates to the federal government's role in the voluntary standards development system.

The U.S. approach to electrical product standards development, product testing and certification is a voluntary and pluralistic one. Many private sector organizations including trade associations, independent laboratories, professional societies, etc. are involved in or have some responsibility for standards development, product testing and certification. NEMA members are active participants in voluntary standard-related activities on both the national and international level. NEMA develops standards for various electrical products and also participates on numerous national and international committees that work through consensus-based procedures to develop standards or harmonize existing standards.

It is NEMA's belief that voluntary standards play a vital part in the design, production, and distribution of products destined for both national and international commerce. Sound technical standards benefit the user, as well as the manufacturer, by improving safety, bringing about economies in product manufacture, eliminating misunderstandings between manufacturer and purchaser, and assisting the purchaser in selecting and obtaining the proper product for his particular need.

As the NRC report (p. 55) notes and advocates, increasingly, government agencies, such as the Department of Defense (DoD) and the General Services Administration (GSA), are meeting their statutory obligations by participating in and adopting national voluntary consensus standards. For many years, NEMA has been a strong advocate for public-private standards collaborative efforts and the adoption by the federal government of voluntary standards for use in procurement and regulation. In fact, federal government policy, as quoted in OMB Circular A-119 (revised in 1993), is described as follows:

> Government functions often involve products or services that must meet reliable standards. Many such standards, appropriate or adaptable for the Government's purposes, are available from private voluntary standards bodies. Government participation in the standards-related activities of these voluntary bodies provides incentives and opportunities to establish standards that serve national needs, and the adoption of voluntary standards, whenever practicable and appropriate, eliminates the costs to the Government of developing its standards. Adoption of voluntary standards also furthers the policy of reliance upon the private sector to supply Government needs for goods and services.

The lighting fixture industry supports the federal government's use of voluntary consensus standards for two reasons: 1) it produces savings to the government in developing standards and 2) it reduces the potential for the development of conflicting voluntary and government standards. I would like to use this opportunity to describe a specific example of a government agency that is mandating policy that runs counter to the direction of federal adoption of voluntary consensus standards for use in procurement and regulation.

Federal government agencies such as the General Services Administration (GSA) are mandating that ceiling systems and recessed lighting equipment be provided in modular metric increments, also known as "hard metric" dimensions, in new construction projects. Recessed lighting fixtures produced in hard metric dimensions are either 600 mm by 1200 mm or 600 mm x 600 mm.

The most common recessed lighting fixtures used today for both government and private sector buildings are 2-foot by 4-foot dimensions, which translate to "soft metric" dimensions of 610 mm by 1220 mm. While there are often a number of other fixture configurations on a project, the 2-foot by 4-foot size is predominant. This fixture size is the de facto industry standard. The 4-foot dimension is based on a 48-inch fluorescent lamp which is sold throughout the world and is considered the world standard.

These recessed fixtures are a commodity item in the domestic construction market and are very competitively priced. The large main-line fixture manufacturers that are the principle suppliers of these standard size fixtures have made major investments in tooling and automation to apply the economies of scale in reducing costs.

The GSA projects which mandate light fixtures produced to hard metric dimensions account for approximately 10 percent of the U.S. lighting fixture industry's shipments. Manufacturers cannot produce hard metric fixtures using current standardized tooling. Therefore, additional tooling is required to produce this non-standard product whose only customer is the federal government. The investments required to retool for producing hard metric fixtures simply would not be justified on the basis of federal building construction alone, resulting in higher unit costs for fixtures required under the federal guidelines. We estimate that, depending on the type of fixture requested in a procurement bid, the additional cost per fixture will run from 12 to 20 percent.

GSA has argued that industry-wide adoption of a hard metric standard will make the lighting fixture industry more competitive internationally. However, in a National Institute of Buildings Sciences study on the lighting fixture industry, GSA states that there exists "no worldwide standard recessed lighting fixture size." They state further: "In North America, the predominant sizes are 2 x 2 ft and 2 x 4 feet." Even GSA's procurement guideline, the Metric Design Guide, is conflicting in requiring hard metric fixtures, but also stating that fixtures should always be of "standard commercial design". A harmonized standard dimension does not exist world-wide and it is not moving toward a 600 x 1200 mm configuration.

U.S. lighting fixture exports are practically nonexistent due to the expensive transportation costs involved in shipping. Lighting fixtures are large and bulky, yet light, making transportation costs prohibitively high. Accordingly, most lighting fixtures are produced near to the customer in markets around the world to reduce costs and meet local requirements.

In summary, NEMA supports the use of the metric system of measurement. The lighting fixture industry is ready and able to provide plans, specifications, and other documentation in soft metric form (metric equivalents of standard sizes) for federal projects. We do not, however, believe there is any value to the lighting fixture industry, to the construction industry, to the national economy, in abandoning conventional size and performance standards and requiring non-standard equipment for federal buildings that are more costly.

Thank you for the opportunity to testify.

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## GSA'S HARD METRIC LIGHTING FIXTURES AND BUILDING SPECIFICATIONS POSE PROFOUND PROBLEMS FOR U.S. INDUSTRY

The General Services Administration (GSA) has made a decision to require non-standard "hard metric" lighting fixtures in its building specifications. Lighting fixture manufacturers believe this step is unwise and unnecessary because it will: (1) greatly increase manufacturing, inventory, marketing, overhead, and other production costs; (2) reduce competition and raise prices to the government and ultimately to the taxpayer; (3) inappropriately cast GSA as the industry's *de facto* standard setter in contravention of Commerce Department and GSA regulations and industry practice; (4) waste energy in violation of equally applicable law and regulations; (5) pose architectural and design problems, particularly for renovations of buildings originally constructed to non-metric standards; (6) do nothing to enhance U.S. firms' competitiveness abroad and potentially imperil their competitiveness at home; (7) run afoul of GSA's express "policy" of gradually phasing in realistic metric requirements; and (8) put U.S. workers' jobs at risk.

### A. Summary of Concerns

The Omnibus Trade and Competitiveness Act of 1988, Pub. L. No. 100-418 ("the Trade Act"), authorizes the government to foster voluntary conversion of U.S. industry to the metric system. To that end, federal agencies are to "use" the metric system for procurements insofar as it is economically feasible and does not harm U.S. industries' competitive positions. The Trade Act expressly provides agencies great flexibility in how to use the metric system to meet a particular industry's needs.

Unfortunately, the GSA has, within the last few months, decided to inappropriately single out U.S. fluorescent lighting fixture manufacturers from other construction suppliers for federal building projects. Effective January 1, 1994, GSA will require immediate conversion of these fixtures' sizes to "hard" metric standards, significantly different from those currently used in U.S. building projects.[1] U.S. manufacturers will need to spend millions of dollars to revamp their manufacturing operations to produce these odd-lot metric dimensioned fixtures or lose eligibility for government procurements. GSA has, however, required hard metric conversion for only five percent of construction supplies. Metric Design Guide, at 6.

### Costs Will Increase Significantly

Hard metric conversion is not economically feasible for this industry; nor will it enhance its international competitive position. The few companies currently capable of making metric sized fixtures do so with specialized, less automated equipment on a job specific basis. Because the metric and inch-pound sized products may be indistinguishable to the eye -- albeit different in length and width -- manufacturers must also be careful to segregate raw materials and inventory. Thus, manufacturers' costs, architects' estimated costs, and product prices will ultimately increase by at least 20% (and may rise much more, depending on complexity of the production process) for these odd-lot hard metric products. Necessary amortization of re-tooling costs may add significantly and independently to cost increases, as well.

### GSA Is Usurping Normal Standard Setting Processes

It is uncertain whether the government's approximately ten percent market share may ultimately prove sufficient to "leverage" the entire industry to metric sizes and render GSA the de facto standard setter for the entire marketplace. That result would, however, impermissibly displace the current standard setters: manufacturers, lighting designers, and architects. Commerce Department[2] regulations governing federal metrication efforts explain that each agency shall:

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[1] GSA explains that, "Hard metric means product is physically changed. The size of the product has been modified in order to be efficiently utilized in a metric system. A handful of currently used building projects may undergo hard conversion." See GSA Public Buildings Service, Metric Design Guide (July 1993), at 9.

By contrast, "[s]oft metric means no physical change. . . . All that is required is that the product literature and engineering data on these products be available with metric dimensions." Id. at 6.

> . . . [r]equire maximum practical use of metric in areas where Federal procurement and activity represents a predominant influence on industry standards (e.g., weapon systems or space exploration)[; and] [s]trongly encourage metrication in industry standards where Federal procurement and activity is not the predominant influence, consistent with the legal status of the metric system as the preferred system of weights and measures for United States trade and commerce . . . .

15 C.F.R. § 1170.4(c) (1993) (emphasis added and in original, respectively).

Obviously, GSA's ten percent market share does not "predominate" the lighting fixture industry. Nonetheless, between the times when GSA imposes the new standard and when the remainder of the industry adopts it, however reluctantly and at great cost, any manufacturer seeking government business will be required to maintain two systems of production, storage and inventory controls, and marketing literature.

### Energy Costs And Design Problems Will Increase

Metrically dimensioned lighting fixtures will not only be more costly, but will waste energy as well. Hard metric fixtures are smaller than currently employed fixtures and fluorescent lamps. The size discrepancy between hard metric fixtures and available fluorescent lamps will cause the fixtures to block approximately six percent of the lamps' light. Light by light, building by building, wasted energy costs will add up.

In addition, the mis-match in size between hard metric fixtures, fluorescent lamps, and existing floor plans will pose architectural and design problems. The lamp-fixture length discrepancy will limit how the fixtures can be configured as a lighting design matter. Furthermore, existing buildings are constructed on the inch-pound scale and do not necessarily easily accommodate hard metric fixtures. Architects and manufacturers predict building design and engineering costs will increase accordingly.

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[2] The Trade Act created the Interagency Council on Metric Policy (ICMP) within the Commerce Department to "coordinate" metrication efforts. See 15 C.F.R. § 1170.3 (1993).

### No Foreign Market Exists For This Commodity

Metric dimensions of lighting fixtures will not assist U.S. manufacturers to compete abroad. No export market exists for these products because they are bulky and thus costly to ship relative to their price. Metrication cannot change this fact. Canada, one of only two conceivable foreign markets, abandoned government efforts to enforce hard metric fixture procurement specifications. Today, U.S. and Canadian private sectors employ traditionally sized fixtures.

### The Law Does Not Require Hard Metrics

Moreover, even if metric specifications are appropriate for these products under the Trade Act, "us[ing]" metric is a far cry from a mandatory, immediate switch to hard metric sizing. Like the Commerce Department regulations, GSA's regulations permit hard metric conversion only where metric is already the accepted industry measurement system. GSA regulations provide that, when an industry is not metric, the agency is to encourage metrication and, if appropriate, provide for gradually phased in metric use. The lighting fixture industry has not adopted the metric system, so GSA's immediate hard metric requirement is out of keeping with its own regulations. GSA's actions in this respect are not only unwise, but may actually violate the Administrative Procedure Act.

GSA could use metric for fixture procurement, consistent with the Trade Act, by converting inch-pound system product measurements to metric without product re-sizing, by rounding hard metric specifications to avoid product re-sizing, or by permitting inch-pound or metric sized products to be used for a period of years. These steps (insofar as metrication is proper at all) are more appropriate and consistent with the dictates of common sense and legislation than GSA's immediate hard metric conversion requirement. They also protect American jobs in small factory towns and cities throughout the United States where these products are made.

## B. Legal Background: No Requirement Exists For GSA To Go Hard Metric

The Trade Act designated metric as the "preferred system of weights and measures for United States trade and commerce" and federal procurements. 15 U.S.C. § 205b(1)-(2) (1993 Supp.). But, the Trade Act forbade metric conversion "to the extent that such use is impractical or is likely to cause significant inefficiencies or loss of markets to United States firms, such as when foreign competitors are producing competing products in non-metric units." 15 U.S.C. § 205b(2) (1993 Supp.).

Even if metric conversion is appropriate, that step does not equate with product re-sizing via hard metric conversion. As explained above, GSA admits that in a full 95% of the cases where it has changed construction specifications to metric, it has not taken the radical step of mandating hard metric re-sizing. See Metric Design Guide, supra, at 5, 6.

GSA's practice of soft metric conversion for most products is consistent with the Trade Act's requirement that private metric conversion be "voluntary" (15 U.S.C. § 205a(6) (1993 Supp.)), whenever the government is not currently the market's standard setter. Commerce Department regulations, quoted above, explain that an agency should "encourage" but not mandate hard metric conversion where the government does not set the standards and the industry has not imposed a hard metric standard on itself.

GSA's own regulations are consistent with the Commerce Department's and do not authorize lighting fixtures' immediate hard metric conversion. They explain:

> . . . solicitations must include specifications and purchase descriptions stated in metric units of measurements whenever metric is the accepted industry system. If metric is not the accepted industry system, the head of Central Office Services responsible for nationwide programs shall ensure that policies promoting and encouraging the use of soft metric, hybrid, or dual systems are developed, except when to do so would be detrimental to the program mission. Whenever possible, commercially developed metric specifications and internationally or domestically developed voluntary standards using metric measurements

> must be adopted. While an industry is in transition to metric, solicitations must include specifications and purchase descriptions stated in soft metric, hybrid, or dual systems, except when impractical or inefficient.

48 C.F.R. § 510.002 (1992) (emphasis added). GSA regulations thus do not authorize the dramatic hard metric conversion steps it took for lighting fixture specifications.

Indeed, GSA need not require hard metric conversion for any industry. Former iterations of its above-quoted metrication policy included a concluding sentence that, "As soon as practical, soft, dual, and hybrid English/metric measurements will be replaced with hard metric measurements." See GSA Order ADM 8000.1A, § 6(e) (Feb. 12, 1990), reprinted in 55 Fed. Reg. 12904, 12905 (Apr. 6, 1990). GSA, however, chose not to include the hard metrication requirement in the regulation it proposed, made subject to public comment and the other requirements of the Administrative Procedure Act, and adopted as a final rule. See 55 Fed. Reg. 43149 (Oct. 26, 1990) (notice of proposed rulemaking for GSA metrication policy omits hard metrication requirement); and 56 Fed. Reg. 2864, 2865 (Jan. 25, 1991) (promulgating 48 C.F.R. § 510.002 as a final rule without hard metrication requirement).

For its part, the lighting fixture industry has not adopted either hard or soft metric standards. The National Electrical Manufacturers Association (NEMA) serves as a standards developer for the U.S. and often international lighting fixture industry. Its member companies supply over ninety percent of the most common four-foot by two-foot recessed fluorescent lighting fixtures used in the United States. NEMA's Guidelines for Metric Conversion, last revised in December 1988 after the Trade Act's passage, affords the affected NEMA subdivision (here, the Lighting Equipment Division) the decision whether to adopt metrication (whether hard or soft). For the basic reasons set out in this document, the Lighting Equipment Division determined it was unnecessary and unwise to change to metric standards. Thus, GSA should have encouraged, not mandated, metric use for this industry following a meaningful dialogue (which, as explained herein, was sorely lacking) with the industry.

The Trade Act affords GSA great flexibility to encourage metric use short of hard metrication's product re-sizing. It requires an agency to "use . . . metric . . . in its procurements" but leaves for case-by-case refinement what that "use" should be. See 15 U.S.C. § 205b(2) (1993 Supp.). The presidential Executive Order and Commerce Department regulations, both implementing the Trade Act, also speak in equally broad terms of "us[ing]" metric insofar as it is "economically feasible" and assists, not harms, U.S. producers. See Exec. Order No. 12770, § 2.a.1, 56 Fed. Reg. 35801 (July 25, 1991), reprinted following 15 U.S.C. § 205a (1993 Supp.); 15 C.F.R. § 1170.3 (1993).

GSA regulations explain there are four options for metric "use": (1) soft metric; (2) hard metric; (3) dual systems ("the use of both inch-pound and metric systems [; f]or example, an item is designed, produced and described in inch-pound values with soft metric values also shown for information or comparison purposes"); and (4) hybrid systems, in which inch-pound and metric values are used for different components of the same system. See 48 C.F.R. § 510.001 (1992). Of the four potential metric "uses", only hard metrication requires the dramatic step of actual and complete product re-dimensioning. Unfortunately and contrary to its own regulations, quoted above, that prohibit it from usurping an industry standard setting function, it is hard metric that GSA has chosen for lighting fixtures.

GSA by-passed other metrication regulations in singling out lighting fixtures for immediate hard metrication, as well. If metrication is appropriate and whatever metrication strategy is employed, Commerce Department regulations require "full public involvement" in the decision (see 15 C.F.R. § 1170.4(g) (1993)), taking into account metrication's "cost effects" on the government (15 C.F.R. § 1170.4(f) (1993)), and effects "particularly" on small businesses (15 C.F.R. § 1170.4(i) (1993)).

Despite these obligations, GSA solicited little or no input from the lighting fixture industry in making the hard metric determination. GSA's Metric Design Guide baldly asserts that fluorescent luminaires (lay-in type only) are "competitively available from domestic sources in hard metric sizes." Metric Design Guide, supra, at 9. GSA seems to have extrapolated this conclusion from lighting fixture manufacturers' statements to the effect that certain of them "have the capability of producing certain types of recessed troffers [fixture bases] in metric modular sizes (referred to as 'hard metric') . . . ."

Certain manufacturers' capability to produce hard metric fixtures is not, however, the determinative metrication question under the Trade Act. Some of the largest fixture manufacturers do not have hard metric production capability. They are now excluded from procurements -- a competition loss for the government.

Perhaps more significantly, that select manufacturers are capable of producing metric fixtures does not equate with the Trade Act's requirement that such production is economically efficient and feasible. GSA overlooks that manufacturers explain they can produce these odd-lot metric fixtures only "on a limited volume scale" and via a "custom manufacturing process . . . [which] adds significant cost and compromises system performance." This custom manufacturing process is traditionally used if an architect makes a limited special order for the unique specifications of an individual project. Specialty production runs employ less automated equipment because the machinery must be continually adapted (and adaptable) to these types of orders. The specialty equipment, accordingly, requires more resources per unit to operate than standard assembly line presses and very probably diversion of resources from the standard presses to the less efficient use. And, the press's operations must halt completely while the series of dies used to make the fixtures are installed.

Hard metric production involves other costs that are less obvious, but mount just the same. Commonly sized metric and inch-pound fixtures are sufficiently close in size that they are indistinguishable to the eye. Thus, to avoid assembly and shipping confusion and attendant safety hazards, manufacturers will be required to clear assembly areas and inventories whenever hard metric products are produced. Most manufacturers predict the need for separate storage areas for materials and finished goods, even to the point of constructing separate storage facilities to accommodate government work. They estimate metric products' inventory carrying costs are, accordingly, a minimum of twenty percent greater than for traditional products. Raw material dimensions will also differ slightly. Items such as raw steel coils must thus be purchased, stored, and used separately. Hard metric product overhead costs will be at least twenty percent higher -- and perhaps greater -- than for traditional products. Additionally, and not insignificantly, manufacturers would be required to re-publish their product literature to account for their hard metric product lines. Marketing costs are expected to rise between three to ten percent. Metrication of this industry thus involves more than simply purchasing and installing a new set of press dies, a step which is itself extremely expensive.

Nor will it prove economically feasible for U.S. manufacturers to convert even a portion of their existing, more highly automated production lines to hard metric. The government only has a ten percent market share, and no other U.S. purchaser currently orders hard metric products. Furthermore, because the bulky lighting fixtures are costly to ship relative to their value, there is little or no potential export market. Canada -- the most conceivable export market -- recently abandoned government efforts to hard metricate the industry. Thus, until (if ever) GSA leverages the standards to hard metric, any manufacturer would continually be required to re-configure its automated press to accommodate a government order. One manufacturer estimated 10,000 standard housings could be produced in the down time necessary to change automated press dies to metric. Similar down time would, of course, then recur when the manufacturer converts the press back to standard production. A manufacturer's alternative to the down time would be to install new six hundred ton presses and auxiliary material feeding equipment, exclusively for government work. As explained above, complete hard metric conversion will not occur (if ever) until after the industry has spent vast sums repeatedly re-tooling and maintaining the separate and more expensive dual product lines for inch-pound and hard metric fixtures.

In the end, manufacturers estimate increased per unit production costs of 20 to 25% for a one piece hard metric production unit and even higher (perhaps even greater than 50%) for more complicated production runs for multi-piece production units. These increased manufacturing costs will, of course, be passed on to the Government and thus taxpayers.

GSA's hard metric lighting fixture conversion will also waste energy. As explained above, a metric fixture is smaller than its inch-pound sized counterpart, so an available lamp will be longer than the metric fixture. The result is that the fixture will block a portion of the lamp's light. Wasted light equals wasted energy. Manufacturers estimate a six percent net energy loss per fixture. Light-by-light, building-by-building, lost energy costs will mount and only increase as more and more buildings are constructed with these mis-matched fixture and fluorescent tube specifications.

GSA's using odd-lot electrical fixtures in a misguided effort to satisfy the Trade Act thus runs afoul of equally applicable and clear directives to conserve energy, including the Environmental Protection Agency's Green Lights Program, the Department of Energy's 1993 Energy Standards, and the National Energy Policy Trade Act of 1992. GSA can comply with both the energy conservation and metrication directives only if it imposes the same type of soft metric standards for lighting fixtures that it is employing for 95% of its construction specifications.

The mis-match between hard metric fixtures and traditionally sized fluorescent lamps (the only ones reasonably available in North America or the world) also poses architectural and design problems. For instance, because the lamps are longer than the fixtures, the fixtures cannot be positioned end-to-end in the contemplated ceiling grids. Further, hard metric designed fixtures and configurations are not always, if ever, easily accommodated in renovations of buildings constructed (and columned) to inch-pound system standards. Architects predict building design and engineering costs will, accordingly, increase. The longer lamps are also more difficult to replace because they do not fit as readily into a hard metric fixture/grid matrix. It should be no alternative under the Trade Act to purchase lighting components abroad to address these fundamental design problems.

On that same note, the Trade Act's linchpin for metrication is assisting U.S. industry to compete abroad. As explained above, no hard metric export market exists. Canada abandoned government-imposed hard metrication as a failure. Thus, hard metrication will not assist U.S. manufacturers to compete abroad. The only possible foreign trade effect is to provide an incentive for foreign manufacturers of hard metric fixtures to bid on government procurements in the event shipping costs are less than the premium domestic manufacturers will be forced to charge for these products.

American jobs are at risk in the equation. Fixture manufacturers are often located in small industrial cities and towns nationwide that can ill afford to have shut downs or lay offs at one of their largest employers to comply with a federal directive that measurement units be converted with absolute mathematical precision.

Particularly because most construction standards are not changing and because fixture standards need not change, a metrication process known as "adaptive conversion" would suit any GSA need to have fixture measurements be expressed in "round" metric units for convenience's sake. The Commerce Department explains that adaptive conversion:

> . . . aims at changing from a magnitude in one system to a magnitude in another that is reasonably equivalent. Above all, this process should result in conversions to magnitudes that are meaningful and practical in application. Judgments in this process are often subjective and may require balancing of competing interests.

Commerce Department, Metric Handbook for Federal Officials (August 1989), at 4 (emphasis added).

Rather than require manufacturers to spend millions of dollars to produce hard metric fixtures for no purchaser other than the Government, the most commonly sized two foot by four foot fixture (actually 610 mm by 1219 mm) could be adaptively expressed as a 600 X 1200 fixture for reference purposes, consistent with the Commerce Department's finding that, "instead of a direct mathematical conversion, a practical and meaningful degree of precision [can be] . . . chosen . . . ." Id. at 5. It should be remembered that the standard inch-pound lumber measurement for the "two by four" is not itself precisely two by four. Id. GSA is taking precisely this rounding approach for rigid steel conduit specifications.

GSA has stated in a manner less formal than a rule that, "Because the private sector has an essential role in the transition to the use of metric measurements, its needs and capabilities must be considered along with those of the Federal Government." See 54 Fed. Reg. 41874, 41875 (Oct. 12, 1989). GSA, however, turned a blind eye to domestic lighting manufacturers' petition that hard metric standards not be immediately imposed for the reasons stated above. Indeed, GSA representatives informed fixture manufacturers GSA "did not disagree" that hard metric conversion would severely burden that industry.

Electric lighting fixture manufacturers are not averse to examining whether a more limited form of metrication, such as soft metrication, might be appropriate for their products. Indeed, they asked GSA for the same soft metric standards for fixtures that it imposed for nineteen of every twenty other construction specifications. Domestic cement block manufacturers were able to reach an accommodation with GSA on rolling back hard metric standards for that product. GSA's intractability in immediately imposing hard metric lighting fixture standards is not only out of keeping with the Trade Act and implementing regulations (including GSA's), but with GSA's more reasonable (and reasoned) custom and practice for phasing in reasonable metric standards for its procurements.

Mrs. MORELLA. Thank you very much, Mr. Lee, on your very good statement and also to Mr. Elders.

I want to pick up from what Mr. Poggi said and really relates to the question I asked the last panel that had to do with the timing. You explained about the fact it takes up to 10 years and this is going to particularly hurt small business.

You are all quite successful in your fields. Of course, Caterpillar has done so very well, and you are experts.

Is this something that you also would agree with and do you think there is something we can do to reduce the standards setting time requirement?

Mr. OKSALA. I think there are a couple of things that one can say about that. The point was made in the earlier panel that market forces will make it happen.

I think there are probably two salient parameters here. One of them is as we move more and more toward electronic means and can avoid travelling to Stockholm or Washington, or wherever else the meeting happens to be held, we can get more efficient and distributing documents electronically.

I think the chief factor that I have observed, and we see it particularly in the information technology industry where we get one new consortia a week roughly, is that the ability of a group to do something in a short amount of time depends very largely on the number of people in the group and the homogeneity of that group.

So if you have an industry, and if you say, okay, the two top companies in that industry get together and agree on a standard, they can do that pretty quickly, and then if everybody said, okay, that is what we will take; if you add the next two it might take a little longer.

If you add not only the companies in the industry but the government agency which has an interest, academic interest, consumer interest, it takes a long time to work those issues out.

So I think, yes, we can improve the process through electronic means, but I am very leery of trying to improve the process by eliminating the participants because that goes precisely to the point that Mr. Poggi raised which is if you speed it up—for example, we could require all of the participants to stay in the meeting for six weeks straight. A large company such as my own wouldn't like to do that but we probably could if it was important enough. A small organization like Mr. Poggi's probably cannot because you are talking about a significant portion of his corporate resource.

So I think the balance there is one of how do you make sure that all the affected parties get a chance to at least comment on, maybe you work out procedures so they don't have to actually go to all the meetings, but at least comment on the process.

Otherwise, essentially you are getting into a situation where the standards are determined by the few organizations that are willing to go to all the meetings.

Mr. RITTERBUSCH. Just to pick up on that comment, I would agree that where we have easily obtained consensus on the issues within the standard, the standard is completed very quickly.

In our industry we have several standards. One deals with the control locations on the machines, and that is very controversial.

We have a lot of vested interests on different types of—that standard printing process was four or five years being batted back and forth.

So it is really an issue of consensus. If we can arrive at consensus early, we can get the job done.

Electronics means will help us because all of us get scheduling problems. We are going to meetings and finding time to do so. If you can do this electronically through the Internet or some other means, I think we are going to take some of the dead time that is in the system, but it is not going to make a real major change.

Dr. DIXON. The operating word here is consensus. We are talking consensus standards.

As a company negotiating to procure materials or components, we could very well take a very rapid approach to a standard and write a company specification. That is perhaps one of the fastest ways to get a standard out into the public.

We define the nature of the materials or the components that we would like and we call it a company standard or a company specification.

As we go up the hierarchy of standards that we prefer to use, we would then start dealing with our industry, namely the automotive industry and as we cooperate with our domestic automotive industry partners or competitors, however you view it, we take a little longer to get acceptable standards.

Going right up to the ISO/IEC system of standards, we understand why the process can be lengthy, but we believe that these can be accelerated.

We have been critical of some of the standards developing organizations, and looking internally we are also critical of how some of our own standards are developed.

But we see ways of improving them by managing our committee structure, getting people who can dedicate the time, keeping continuity in the process so that we don't have a different person coming in and having to relearn the subject matter.

Mr. POGGI. Well, I don't think there is any simple answer.

My purpose was to raise the problem that a small business is faced with.

I think there are some interesting comments that came during the replies here that sort of speak at the problem. There was the term vested interest.

I am a testing laboratory. I am only looking for standards so that I can test the product. But I think when you look at standards from a manufacturing viewpoint there certainly can be major impacts on your business.

And I think we need to find a mechanism where we can be assured of the process moving in a timely efficient manner.

It does not make sense to me that the Europeans in 10 years could write standards covering immunity for consumer electronic type products and have three revisions by now and we are still in the draft form.

Mr. LEE. I would offer only a couple of comments in this area. It seems to me that in the past 10 years, and I have been, I think, pretty involved in a lot of that, we have as an industry probably split our time about 50–50 between attempting to develop consensus standards that would work for the industry and fighting against those mandated standards that have come out of a number of places, both at the State and Federal level.

And clearly if you look back over all of that, the ones that seem to have some longevity and seem to be worth while are those ones that have taken time and effort and have been arrived at some type of collaborative process.

Those that have been imposed have generally caused nothing but a lot of work, effort and heart ache and, in the main, don't survive long term.

So I do not know that the collaborative process is one that can be legislated into something faster than humans are going to deal with, but I think it is the only way.

Mrs. MORELLA. As Mr. Poggi said one size does not fit all, and you mentioned, Mr. Oksala, and we heard this in the first panel, too, the fact that Federal agencies should pay some dues to ANSI. I think you all probably agree, do you? Federal agencies should contribute in some way.

Did I misinterpret you?

Mr. OKSALA. Oh, no. You got it exactly right.

The comment I want to make is I think it is broader than just a dues situation. Belinda Collins referred earlier to the concern about participation by Federal agencies.

The Federal Government, whatever else it is, is one of the largest procurers of products in the world, maybe the largest. So it has very strong interests apart from anything else in participating and development of standards and the technical experience that is there is really valuable.

So, not only do we think or do I think that the Federal Government ought to be paying a reasonable share of the cost based on what it gets from the system, but also to make sure that the Federal Government people continue to participate in the system.

So that is another kind of resource, and as Belinda said it is real easy when you are trying to cut money to say, "Oh, standards, Oh, going to Geneva, Oh, kill that."

It is a tough thing. That is something we really have to watch.

Mrs. MORELLA. Everybody agrees with that.

Mr. Lee—Mr. Metric—I wanted to ask you a question which was actually brought to my attention and it has to do with what the cost implications are of GSA's unwillingness to work with the lighting industry's consensus standards on fixture dimensions. Someone drew me a little diagram.

Would you like to comment on that?

Mr. LEE. I would.

I think, you know, the GSA as we understand it has imposed these standards for I guess three basic reasons, and I could go into those.

But one of them is that metric would not cost any more than the standard of the industry which has been in place for some time. Of course, this is just not true.

When you look at the economies of scale that have been achieved by the fixture manufacturers with, you know, large investments in tooling and automation, to produce these fixtures in the most economic way they can be produced, and when you consider you would have to make metric fixtures in a far, far more inefficient manner unless companies were willing to invest millions and millions of dollars in the tooling required to make metric fixtures, which they would not be willing to do, you are going to have equipment which is going to be somewhere, for common lighting fixtures such as you have in the ceiling here in the metric size, you are going to have cost adders of somewhere between 12 and 20 percent per fixture added to the cost of that equipment.

We are experiencing that today in projects that have in the past year been specified by these agencies and are, you know, being constructed and going in place, and we are in some cases furnishing that equipment but we are making it in a very ineffective, inefficient manner, and the cost associated with that equipment is running somewhere in the 15 to 20 percent range.

One of the determinants of that is that, without getting into all the detail, there is a lamp up in those fixtures and that lamp is four feet long, 48 inches long, and that is the world standard for lamps, 48 inches long.

You make a metric fixture, and what you end up doing is you make a smaller fixture and you have to make it in such a way on the back side that it accommodates a lamp that is longer than the fixture, and that makes no sense.

It also means that the fixture has a smaller opening so that the efficiency of the fixture in terms of the light it delivers into this room is cut from 6 to 10 percent.

So what you are doing, in essence, is you are buying a much more expensive fixture and you are getting less out of from what you would get from standard equipment.

So, the advantages if you can find them are—you can't because they are nonexistent.

Mrs. MORELLA. It seems to me there is something that has to be done about that. Whether it gets back to the fact that people are not quite ready to accept the metric system. I know there was, I think, a national conference in Arizona and Mr. Tinsley gave me the plate which said, you know, "Metric," and I think wasn't there a protest or something about metric even being used?

Now I understand the Senate is now changing a highway regulation they had which required that there be metric chronometers, and that is saying something that is kind of onerous in terms of trying to come up with standards, and it gets into the question, too, are we the only country that does not use the metric system consistently?

Does anybody want to comment on that? I think it would be a competitive problem.

Dr. DIXON. I am told that we are one of at most three that do not use the metric system.

I think what Mr. Lee was getting to was voiced on the earlier panel that said we probably should let the market dictate.

There are some examples where the accepted global standard is nonmetric, and I don't know all of them, but I think in the automotive industry as to the wheels that you use on the cars, the standards for those wheels are in inches, and it is accepted globally. So, again, here is another case of letting the market dictate.

We at Ford have adopted the metric system as a predominant unit that we will use for our product design. That is not to say that we are completely metric. There are cases where we continue to build products on the old system primarily because we do not want to go back and redo an entire product merely for the sake of changing the units of measurement.

Mrs. MORELLA. You know, I understand that the new advanced technology laboratory being built at NIST is being built to hard metric specifications, and therefore, it means that most of the material must be imported and GAO estimates that the cost increase will be, you know, about 20 or 25 percent. Is that true?

Dr. DIXON. If I may, Madam Chairman, sometimes we need to look at these costs as investments in our future because if we do not take them now we may find later that we are behind the eight ball in the world market.

Mrs. MORELLA. That may very well be the case. You express it exceedingly well.

I appreciated the fact that you did look at the report, and I noticed in your testimony that I perused that you have given some of the recommendations that you would have in the report.

You know, as representatives of global companies in a diversified across product lines, you do benefit from the internal self-imposed standards to make your companies unique and competitive internationally.

No different than domestic markets, the international marketplace will decide, as you said, what it wants to buy and the quality that it wants for the price.

For example, market forces decided the standard and the desire to create uniqueness for VCRs with VHS or Beta, remember that, when that came up, and everybody thought Beta was going to do it and it just never did do it.

Why should the U.S. Federal Government be involved in a standard setting except to protect the American consumer from unsafe products either domestically produced or imported? We touched on this to a degree.

Would you like to add anything to that whole concept?

Mr. OKSALA. In a world which was totally private sector, that might be a reasonable thing to do. But we find ourselves working in a mixture of governmental areas, regulations, for instance, which refer to standards, and consequently there is a great deal of interaction between industry and government.

In most countries, the level of government in the process, so to speak, is larger than in the U.S. But we do get into cases, particularly conformity assessment.

I would concur with specifically the NRC report, the standards process works pretty well, maybe not perfectly, but it works pretty well, and it works pretty well internationally as well.

The conformity assessment area, on the other hand, which is based on those standards is a much tougher nut, and it is where government-to-government activities are really necessary, and we talked earlier about mutual recognition agreements.

Mr. Poggi's testimony, for instance, refers to the European Community insisting on some kind of blessing by the U.S. Government.

Whatever the process is, there is clearly a role for government here, and that, in addition, of course, is to its participation like any other organization as a procurer of products, and, therefore, having a vested interest in seeing standards and in some cases which standards.

Mr. RITTERBUSCH. I would like to address the question also.

Particularly in the safety area, we certainly need a very active partnership between government and the private sector in developing standards, and government has a very appropriate role to consider the public and the worker interest in making sure that the standards are developed, but, again, not exclusively but in using the resources of the private sector.

I do agree with Steve on the conformity assessment. That is where we could certainly need government participation in dealing with the issues outside the U.S. and also in this country between states and locals.

One of the issues that we discussed a lot in the committee meeting deals with the various city requirements. You have gas valve requirements in all the major cities, New York, Minneapolis, Chicago. They all have slightly different conformity assessment programs.

Therefore, a supplier trying to sell valves as part of the appliance in those cities needs to go through duplicative conformity assessment.

That is where I think we need to make some real gains by eliminating that duplication by getting New York to recognize California or whoever has the best standard out there.

I also included in my testimony I think we need to see some benchmarking between the various cities and states to make sure that we find out who has the best practices and put those in place across the land.

Mrs. MORELLA. Can NIST as the lead agency help out with that?

Mr. RITTERBUSCH. I think so. That is why we said that. NIST with its technical competence should be able to help the agencies in some of these areas to ferret out which are the best, which are the most practical solutions, and then encourage the agencies to adopt them.

Mr. OKSALA. We mentioned the Department of Energy earlier. I was thinking about at the time as an example of the duplicative program where the Department of Energy is at this point at least still considering, I believe, going through a fairly complex process to put labels on computers as far as energy efficiency is concerned, in spite of the fact that EPA has an energy star program which, as far as I know, everybody is very happy with. You have to eliminate that kind of stuff.

Dr. DIXON. I want to second what you and Jerry have said.

From where I sit, I see a big role for the government in harmonizing, as Jerry said, among States among agencies.

We are trying to harmonize among countries on the private sector as we deal with our partners and our other companies globally, and I think the true role of the Federal Government should be focused at harmonizing among the agencies and the States.

Mr. POGGI. I think there are two roles that government can fill in standards.

The first one on a national basis is certainly the coordination of what was mentioned in the report getting the States together and harmonizing national standards.

On the international scene I believe there is a real need for government to assure access of American firms to international standards writing activities.

That was mentioned in the earlier panel that there are certain Japanese and European standard writing activities that were essentially shut out to American interests.

I think government, probably through a negotiating process, USTR, should include standards in mutual recognition agreement talks.

Standards have not been considered a conformity assessment activity. It has been separate.

Certainly it reared its ugly head in some of the discussions that access to standards internationally is important.

Mr. LEE. I agree with almost everything I heard. I think, you know, clearly the harmonization is an important set of issues for us as an industry, certainly both within the country and internationally. I think that is a key thing we look to the Federal Government for.

Mrs. MORELLA. This has been a very harmonious panel, I must say. I want to also comment.

Mr. Ritterbusch, you are the first one to actually submit testimony for this Technology Subcommittee over the Internet which I think is kind of neat.

Now the chair will recognize the chairman of the full Science Committee, Mr. Walker.

Mr. WALKER. Thank you, Madam Chairwoman.

First of all, I want to tell you what a trooper she is. I worked her until midnight last night, and then the Speaker worked her until 10 o'clock this morning, and now she is holding a hearing here. We have been kind of going around the clock here. So she is a real trooper here.

Mrs. MORELLA. You, too, Mr. Chairman.

Mr. WALKER. We do appreciate your being here and in talking on this, I think, extremely timely and important topic.

I must admit it is a troublesome issue. I could not agree more with the basic precise where you are going. We need to have industry-led standards that allow us to then conform what we are doing to a rapidly developing marketplace.

And in all honesty that is a role where I see government being very difficult in finding its proper role, because government tends to always be a lagging indicator. It is the nature of us. It is the nature of the policy process. You know, I think that that is true.

Yet, I also understand the need for you to develop standards so that you are not dealing with 50 different States or a thousand different communities or hundreds of nations now in the international marketplace.

The problem is there they need to come to government to get some kind of coordination through the government. The moment you do that government then assumes what you need is far more than our coordination.

Government then assumes that what you need is our help in developing all of these standards, and we begin to see the situations arise where then government begins to impose its will on the marketplace, which it seems to me is the antithesis of where we have to go.

I say that as a preliminary in the hopes that some of you might lead me to understand how we bypass that dilemma.

Looking quickly here at one of your recommendations in a statement made in panel 1 by Mr. Hufbauer, "Congress should enact legislation replacing OMB Circular A–119 with a statutory mandate for NIST as the lead agency for ensuring Federal use of standards developed by private, consensus organizations to meet regulatory procurement needs."

That is good. I mean that is good stuff. That is the direction we ought to go.

How do we get there?

Mr. OKSALA. I will start. I think the first thing to do is to recognize that particularly in the conformity assessment area and I think that is much more bothersome to us in industry than the standards area, but to recognize that our Federal Government and then our States are a decentralized system with not a whole lot of communication and coordination between them.

Simply by having a lead agency, as was mentioned in the first panel, you heighten the awareness of not only the agencies but of Congress, and so maybe we get to the point where three agencies don't go off with the same mission from the different committees to develop three different standards, because somebody said, "Oh, well, NIST is coordinating that," and it may, in fact, result in three different standards, but at least it will be done with the knowledge and intent of what you are doing rather than doing it out of ignorance.

I think that is an important part in a role that government can play.

I think an additional one is that agencies have characters and there are, and I won't name any, but there are good guys and bad guys from industry's perspective.

Quite honestly, from my industry perspective, we view NIST as one of the good guys, so I will mention one.

We think that they can play a real role in making sure that the good guys are supported and the bad guys are at least chided if not anything more substantive.

So I think there is a whole coordination effort that will make, even ignoring the international scene and the local scene make the Federal Government a more coherent and cohesive organization.

Mr. WALKER. Is that in part because NIST has seen its tradition and then the market has built a culture around the idea it is a standards agency and does not have particularly a role in trying to set the agenda for the businesses?

Mr. OKSALA. I think it is partly that. I think it is partly that all of the people that I have met at NIST, the ones that I deal with, have a mind set which is to try to help industry accomplish their goals.

Mr. WALKER. But that is the culture?

Mr. OKSALA. Yes.

Mr. WALKER. It seems to me that is what I find in these various agencies. The culture tends to follow what they saw as their original mission or at least how their mission grew up, and then the people there tend to reflect that culture, and if the culture is adversarial to business, you end up with a problem. If they, in fact, see their mission as being complementary to business then you get a different kind of impact.

Mr. OKSALA. Exactly.

Mr. WALKER. We, in fact, moved last evening, thanks to Mrs. Morella working there late last evening, to go exactly in the direction we are talking about here in getting the authorization for taking that kind of lead.

What I want to try to prevent, though, if we can, is that step far too often takes place, that once there is a pattern set and a lead agency done, that not so much the culture in NIST becomes your problem; we become your problem.

Somebody begins to understand that there is an ability here to set standards by using the NIST role, and we begin to see language in appropriation committee reports, in authorization committee reports, in actual amendment language, that says when you are setting standards for the industry here are a few things that you must include.

Then, I think you get on a very, very slippery slope. I realize there is no way to prevent Congress from doing what Congress is going to do if you have a majority of the votes.

But is there some means by which you see we can preserve the integrity of the process which I think we are trying to set up with the best of intent.

Mr. RITTERBUSCH. I guess I would like to go back to the original question. In terms of one of the aspects we are really asking in the report is that members of the agency working through NIST participation in the voluntary private sector standard development process.

And a term that we have coined within the private sector now with a lot of our companies is strategic standardization management.

What that really means is that in our company we decide what is our business what are our core businesses that we must ensure that in the future there will be the right standards and the right place at the right time.

I think we would like to have the agencies also practice strategic standardization management in terms of what are their future agendas, where do they see that their role will be, and then have staff from that agency, working through a cooperation of NIST, be on those standard developing processes and help write the future standards.

That way when they need to apply a standard for a government regulatory or government legislative process the standard will be in place, and they will be able to apply it.

They will learn what is going on by participating in the system. They will have a heads up on interpreting that standard so they can work with Members of Congress and other people in the regulatory bodies to apply that standard within the government role.

I think that would be the best way to get this thing started.

Again, NIST can serve as an agency to help coordinate to facilitate the different agency participating, and I think NIST could very easily explain what strategic standardization management might mean to these agencies and also do some work in that area.

Mr. WALKER. That is very helpful. I thank you.

Madam Chair, just one more round here and building on that.

Dr. Dixon, I notice that you are with Ford. You know something just kind of popped to my attention here in recent days that strikes me as something that could force us to begin to develop technology standards in the automotive industry. I think your company is the one that is taking a look at that.

Somebody has evidently developed a process by which you change the radiator on the car to make it basically into a vacuum cleaner that cleans up ozone and carbon monoxide and changes it into oxygen and carbon dioxide.

I don't know whether or not you have found that is, in fact, a real process or you are in the testing stage.

But that becomes a pretty exciting prospect for people who have been dealing with the automotive industry, and actually what fascinates me is looking at the front of the car rather than the tail pipe. It is kind of an interesting way of looking at the environmental problem.

But should that technology prove real, it seems to me that you will pretty quickly get an effort aimed at the automotive company saying you have to begin installing that immediately and instead of allowing the automotive company to set the standard for the industry that might include this new type of technology that there will end up being a political push to force that.

And as I understand it, as I say, it is exciting. The cost I saw was something like perhaps $500 or $1000 a car which means you are talking about a pretty substantial investment for the industry if we begin to force them in that direction.

I wonder if you would comment on that kind of scenario.

Dr. DIXON. Yes, Mr. Walker. Certainly, I would like the opportunity to say:

I am indeed intrigued by the technology. In one of my past careers I happened to have delved into heterogeneous catalysis, which is a principle that this device uses; therefore, I know of the feasibility of such technology.

One of the things that the concept of strategic standardization management entails, the one Jerry introduced here, deals directly with instances like this where we get standards not to lag a technology but to go along with introducing new technology.

It is indeed tempting for people to want to legislate use of technology that seems so beneficial, but we have to balance this, first, with one proving the technology, identifying the right applications for this, and then identifying when it is appropriate and under what conditions it can be used. And those are the things that go into the standards that say here are the times for using this.

I think, again, the marketplace will dictate this. Here is a bit of technology that has been introduced at a time when people think of a tail pipe of a car and of the Eagles as being polluters rather than the numerous benefits. I think of the transportation, what it has done for global movement of goods and services.

And I don't know how to lower the tendency for regulations. You must use it at this time.

Mr. WALKER. What strikes me is that you have in California a standard which is forcing automobile companies to invest billions of dollars at the present time in the electric car technology in hopes of meeting the standards of California and, in fact, if this device proves to be as good as some of the original notices on it, you may not want to have electric car technology because this might be something that would say that you want to keep cars on the roads that are actually proving to be vacuum cleaners on the highway.

So, you know, the regulation then becomes a harmful impact in trying to move toward new technologies.

Dr. DIXON. That was just about the commentary that I heard on one of the local stations in Detroit. We probably should look at mandating the use of this in California rather than getting the electric cars or electric Eagles, or whatever the technology is for zero emissions.

Mr. WALKER. That is very helpful. Thank you very much.

And thank you, Madam Chairwoman. We appreciate it.

Mrs. MORELLA. This has been a very informative panel. I appreciate very much your coming here and spending the time with us. I hope that again, as I say, if we can use you as resources as we move on the subcommittee and the full committee we will appreciate it greatly.

I just want to thank you all for coming. You were just terrific. I thank you.

The meeting is now adjourned.

[Whereupon, at 12:20 p.m., the hearing was concluded.]

## APPENDIX

CHEMICAL
MANUFACTURERS
ASSOCIATION

# STATEMENT OF
# THE CHEMICAL MANUFACTURERS ASSOCIATION
# TOTAL QUALITY COUNCIL

## MAINTAINING OUR INTERNATIONAL COMPETITIVENESS: THE IMPORTANCE OF STANDARDS AND CONFORMITY ASSESSMENT ON INDUSTRY

SUBMITTED TO THE HOUSE COMMITTEE ON SCIENCE
SUBCOMMITTEE ON TECHNOLOGY

July 7, 1995

2501 M Street, NW 202-887-1100
Washington, D.C. 20037 Telex 89617 (CMA WSH)

The Total Quality Council (TQC) of the Chemical Manufacturers Association (CMA) is pleased to provide these views on some standards and conformity assessment issues that affect CMA members' international competitiveness. CMA is a non-profit trade association whose member companies represent 90 percent of the productive capacity for basic industrial chemicals in the United States. The TQC consists of 32 companies with a particular interest in international quality standards and conformity assessment issues.

## Importance of Standards and Conformity Assessment

CMA's member companies are subject to consensus standards in virtually every aspect of the industry's activities, both at home and abroad, and have participated actively in the development of these standards in the United States. CMA and its members are also actively involved in developing and applying the criteria and procedures used to assess the conformity of industrial chemicals to these consensus standards. CMA has a strong interest in seeing that the U.S. conformity assessment system aids the international competitiveness of U.S. products.

CMA companies' abilities to successfully compete in international markets can be severely reduced by problems related to foreign standards and certification. For example, in many foreign markets, either the government or the private sector requires certification of conformity to standards by domestic entities. This can impose significant and unnecessary costs on U.S. exporters whose goods have already received certification to the relevant standard in the United States or another country. Eliminating such multiple conformity assessment requirements would significantly improve CMA members' competitiveness.

Based on CMA companies' experience, the TQC would like to offer its views on two particular issues related to government participation in standards, conformity assessment, and quality activities: the proper role of government and the importance of the Malcolm Baldrige National Quality Award Program (Baldrige Program).

## Role of the Government

The U.S. standards and conformity assessment system is generally private-sector based. This system works well, and it is crucial that the government not engage in activities or adopt policies that threaten this system's non-governmental nature. With this in mind, CMA does believe in the importance of coordination between the government and private industry to establish a credible and coherent domestic conformity assessment system.

In particular, CMA supports government activity in the form of intergovernmental negotiations, such as those towards mutual recognition agreements (MRAs), that seek to assure market access for U.S. products that require conformity assessment. The government also can play a role in representing U.S. interests in international standards forums in which representation at the governmental level is necessary. CMA urges the government to continue its current efforts in these areas, and to seek additional opportunities for MRAs.

Apart from exercising its authority in international discussions, the only appropriate direct role for the government in the conformity assessment process is to provide recognition to private sector accreditation bodies. Such recognition may be necessary in the context of negotiating MRAs. However, the government needs to exercise this role only when it is expressly required by foreign governments. Even then, government action should be limited to the minimum necessary to ensure that U.S. products subject to foreign regulation can be freely marketed abroad.

The recently instituted National Voluntary Conformity Assessment System Evaluation (NVCASE) program is intended to enable the U.S. Government to provide trading partners with assurances that U.S. conformity assessment activities satisfy specified criteria. CMA supports the NVCASE program to the extent that it will provide government recognition of competent U.S. conformity assessment bodies. This will help to eliminate the multiple conformity assessment procedures faced by U.S. industry. However, it is important that this program remain limited to recognition as opposed to certification activities

CMA agrees with the recommendation in the recent National Research Council (NRC) Report, Standards, Conformity Assessment and Trade into the 21st Century, that the federal government phase out its conformity assessment procedures. These procedures are unnecessary in light of the extensive services available from the private sector. In this regard, CMA also agrees with the NRC Report's recommendation that federal agencies be strongly encouraged to use private sector standards and accreditation services. This is already government policy, as expressed in the Office of Management and Budget's policy directive, Circular No. A-119. By strengthening its current reliance on private sector services, the government would both improve its own operations and increase confidence in those private sector services here and abroad. (CMA does not have a position on the Report's proposal to develop a National Conformity Assessment System Recognition program. At the very least, however, CMA strongly believes that any such program must involve only recognition, and not certification, activities.)

## Importance of the Baldrige Program

CMA supports efforts to streamline government. As Congress considers plans to do so, it should be careful to recognize programs that work in a cost-effective manner. The Baldrige Program is one such program. The Baldrige Program provides an important and respected source of education and information for U.S. companies seeking to improve their quality and hence their competitiveness. It does so at a low annual cost, and is an important investment in U.S. industry. Most of the costs, including financial and human resources, are borne by industry through a government/private sector partnership. In its efforts to cut unnecessary and wasteful government spending, CMA urges that Congress not take action that would result in elimination of this program.

Conclusion

Standards and conformity assessment issues impact the competitiveness of U.S. industry. The role of the government is best limited to supporting private sector activities, especially through recognition of private sector accreditation bodies. The Baldrige Program is an important, cost effective assessment tool for U.S. industrial quality and competitiveness. It should continue to be sponsored by, and receive nominal funding from, the government.

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Statement for the Technology Subcommittee

of the

House Science Committee

U.S. House of Representatives

on the

# NATIONAL RESEARCH COUNCIL REPORT "STANDARDS, CONFORMITY ASSESSMENT AND TRADE INTO THE 21ST CENTURY"

Presented by

National Fire Protection Association

June 29, 1995

Submitted by:

Anthony R. O'Neill
Vice President
Government Affairs

Thank you for the opportunity to share with the Subcommittee the views of the National Fire Protection Association (NFPA) on the recent report of the National Research Council, *"Standards, Conformity Assessment and Trade Into the 21st Century."* In this Statement, we address two issues: NFPA *De Facto* International Standards and OMB Circular A-119.

First of all, we believe the NRC and its Committee of experts have produced an excellent report that is well researched and will be a valuable resource for policy and decision makers in both the public and private sectors in the years to come. We therefore compliment the Subcommittee in using the NRC report to focus on some of the challenges we as a nation face in world trade competitiveness. Most importantly, the NRC report fairly and accurately describes the U.S. standardization system which is decentralized and complicated... but one which works extremely well because it is market driven... also it is the most responsive system in the world to advancing technological needs.

We would also like to acknowledge the leadership of the National Institute of Standards and Technology (NIST) in advancing the interests of American technology and competitiveness by strong support of the U.S. standardization system and through their coordinating role within the Federal government of standardization activities. In addition, we acknowledge the leadership of the American National Standards Institute in coordinating the vast number of private sector standards development activities in the United States. We are pleased that the Subcommittee acknowledges both NIST's and ANSI's leadership in advancing our nation's competitiveness by inviting them to participate in this hearing.

## The National Fire Protection Association

To place our statement before your Subcommittee in the proper context, we need to say a few things about the National Fire Protection Association (NFPA). Next year, NFPA will celebrate its Centennial of service to the citizens of our nation in the development and maintenance of national consensus fire and electrical safety codes and standards that are technologically some of the most advanced in the world. They are adopted and widely used for regulations and procurement specifications at Federal, State and local government levels here in the United States. NFPA is somewhat unique among other standards developers in that NFPA documents reach beyond a single focused topic and cover a wide range of the built environment, addressing safety in almost all types of buildings, occupancies, processes, and modes of transportation.

Because NFPA Standards are "world class" technologically, they are being recognized increasingly throughout the world as "the state-of-the-art" technical documents for a wide range of safety-related issues... The National Electrical Code®, one of the most widely used safety standards in the world, is sponsored by the NFPA and is almost universally adopted and enforced for electrical safety throughout the United States. The National Electrical Code® is the technology leader and the basis for electrical safety requirements in many other countries, especially in North, Central, and South America.

## NFPA Standards—*De facto* International Standards

Before commenting on one of the specific recommendations of the NRC report that is before this Subcommittee today, we would like to describe for the Subcommittee how NFPA's national consensus codes and standards are used in other parts of the world and how they contribute to American and trade competitiveness for a wide range of equipment marketing efforts.

It is important to note that as an extension of its Mission Statement, NFPA seeks to advance fire safety by pursuing international partnerships and participating in international standards development.

Some examples of these international partnerships include:

☐ NFPA, with the support of ANSI, has entered into a memorandum of understanding with COPANT, the Pan American Standards Commission wherein Latin American and Caribbean countries will be encouraged to adopt NFPA codes and standards where there are no comparable ISO standards... and we are actively in the process of providing official Spanish language editions of several dozens of NFPA's codes and standards to be used throughout the Americas.

☐ NFPA and representatives from Canada and Mexico have formed the Correlating Committee on Electrical Installation Codes of North America and their job is to harmonize the North American Electrical Installation Codes.

☐ NFPA 79, the electrical standard for industrial machinery, has been produced in the IEC format and has been harmonized to a great extent with IEC standards.

☐ NFPA 13, Installation of Fire Sprinkler Systems, is used in whole or in part as the basis for regulations in several countries around the world including as far away as Australia.

☐ When halon fire extinguishing agents were considered harmful to the Earth's ozone layer, NFPA was in the forefront of developing a new world class standard, NFPA 2001 "Clean Agent Fire Extinguishing Systems." This new standard was developed by an NFPA Consensus Committee with full participation by EPA and is ANSI-approved. During its development, representatives from ten countries around the world participated on the NFPA Committee. It is now the *de facto* international standard on halon replacement agents.

☐ Aircraft rescue and firefighting services at airports throughout the world are covered by NFPA standards adopted by the International Civil Aviation Association (ICAO).

☐ Following the Gulf War, NFPA Codes and Standards were used extensively in Kuwait for the rebuilding of the country's infrastructure, and that use continues today.

As you can see NFPA is building coalitions... developing international partners... around the world in a spirit of cooperation to enable our codes and standards to be translated and used... but we also have been able to successfully enter into mutually beneficial licensing agreements with our partners which not only protect the quality and integrity of our intellectual property, but assure continuing revenue to underwrite the cost of developing these standards on in to the future without burdening the American taxpayers.

At last month's NFPA Annual meeting and conference in Denver, Colorado, representatives from 50 countries attended and many of these participated in the debate and technical review of NFPA's codes and standards that were being processed for revision.

In short, NFPA codes and standards are adopted, adapted and are used in countries around the world and are indeed *de facto* international standards. We have often been asked why this is so.

Years ago, NFPA's International Standards Advisory Committee researched why NFPA codes and standards are used so extensively in the international marketplace. The answer was rather simple:

☐ Because they are often the best standards available... anywhere.

☐ Because they are developed through a truly consensus process.

☐ Because the membership of NFPA technical committees have unprecedented technical expertise.

☐ Because NFPA codes and standards are timely, up-to-date and represent the latest state-of-the-art.

## Enforcement of OMB Circular A-119 Needs to be Strengthened—Comments on NRC Recommendation 3

Ironically, while the rest of the world is growing in acceptance and use of NFPA's codes and standards, we are finding that our own federal government seems to be on a plateau... not able to maintain even the modest level of participation in our system of years past and in many agencies not able to increase the use of our standards or at least update references to the latest editions. This leads to NFPA's comment on one of the most important of the NRC Recommendations, namely, OMB Circular A-119 needs to be strengthened...

One of the areas of interest to your Subcommittee is the effectiveness of OMB Circular A-119 in persuading Federal government agencies to use private sector-developed national consensus standards for procurement specifications and regulations. A-119 also encourages federal agency staff to participate in the private sector voluntary standards development process. We would like to comment on both aspects.

## Federal Government Participation in the NFPA Codes and Standards Process is on the Decline

Over the years, NFPA's standards-making process has benefited tremendously from the active participation of federal government employees, but we have seen a decline in recent years as government agencies re-organize and downsize. Currently, NFPA has 182 federal government representatives out of a total of 4500 committee representatives throughout our system. This number is down about one-half of what it was ten years ago... showing a marked decline in federal government participation in our system.

NFPA is not alone... as pointed out in the ANSI testimony today, many of our sister standards developing organizations are experiencing the same decline... Circular A-119 is too often ignored, often by those who make decisions as to whether federal employees are authorized to devote time and travel expenses to participate in technical committee meetings or to work on draft standards in progress.

## Federal Government Adoption and Use of NFPA Codes and Standards is Growing for Procurement and Acquisition Purposes but Remains Weak in Many Agencies for Regulatory Requirements

When the federal government purchases fire protection equipment or installations for the protection of government employees and property, most agencies are leaning more and more on NFPA standards in their procurement specifications; for example, the Department of Defense has been replacing "Mil Specs" with NFPA standards.

The use of NFPA Codes and Standards for regulatory purpose is a mixed bag and by no means uniform throughout the federal government.

As pointed out in ANSI's testimony today, NFPA Codes and Standards are adopted by several federal agencies for regulatory purposes; most noteworthy Health and Human Services fire safety requirements for Medicare and Medicaid eligibility in health care facilities, HUD Minimum Property Standards, Coast Guard maritime safety regulations and OSHA workplace safety requirements. In all, NFPA standards are referenced in over 400 CFR citations.

But we see a disturbing trend in recent years... a trend that is characterized by several factors:

☐ Agencies' inability or reluctance to update standards references to current editions... many federally referenced standards are obsolete having been updated by the standards developer to reflect today's state-of-the-art several times since the federal agency originally adopted the standard. Examples include numerous standards adopted by OSHA for workplace safety which OSHA is attempting to deal with through negotiated rulemaking.

☐ A reluctance to replace obsolete and unamended technical requirements in federal regulations with state-of-the-art national consensus safety standards... even though the original federal regulations were transcribed from national consensus safety standards of that day and age. Examples include HUD's Manufactured Housing Construction and Safety Standards (transcribed almost verbatim from the 1974 NFPA/ANSI National Consensus Standard 501B) and the Liquefied Natural Gas Storage Standard of DOT (transcribed from the NFPA/ANSI Standard 59A fifteen years ago). In both cases, the Agencies admit many of the federal technical requirements are out of date and they would prefer utilizing the latest national consensus standard.

☐ Uncertainty over the impact of Congressionally mandated regulatory reform on the ability of agencies to adopt national consensus standards.

## CONCLUSION

We agree with the thrust of NRC Recommendation 3, that OMB Circular A-119 needs greater emphasis and solid backing by not only the Administration but by Congress.

One very practical step the Congress can take now is to recognize private sector-developed national consensus standards as acceptable tools for federal agencies to utilize in regulatory reform. A positive signal from your Committee now will go a long way in motivating agencies to adhere to the principles of OMB A-119.

Thank you for the opportunity to submit this statement for the Subcommittee record. As you can surmise, we have only touched the "tip of the iceberg" of standardization issues before your Subcommittee. We would be pleased to provide further details and assistance to the Technology Subcommittee at any time.

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# TESTIMONY OF ACIL

# BEFORE THE SUBCOMMITTEE ON TECHNOLOGY

# OF THE U.S. HOUSE COMMITTEE ON SCIENCE

## AT HEARINGS ON THE NRC STUDY:

## "STANDARDS, CONFORMITY ASSESSMENT, AND TRADE INTO THE 21ST CENTURY"

ACIL is pleased to have this opportunity to comment on the National Research Council's report on "Standards, Conformity Assessment, and Trade into the 21st Century."

ACIL (formerly the American Council of Independent Laboratories) is the national trade association of independent, tax-paying testing and research firms. Our members provide services to industrial and governmental clients in a wide range of disciplines.

For several decades, ACIL has promoted the importance of laboratory accreditation as a means of demonstrating a laboratory's competence and giving assurance to its clients. ACIL was instrumental in a number of constructive initiatives, during this period. These include: the establishment of Committee E 36, within ASTM; the creating of the NIST's National Voluntary Laboratory Accreditation Program; the formation of the American Assn. for Laboratory Accreditation; and, in 1994, in conjunction with NIST and ANSI, the establishment of LAWG, the Laboratory Accreditation Working Group.

Unfortunately, despite the best efforts of ACIL and many others, the U.S. laboratory accreditation situation is far from what it should be. It is well described by the NRC report (Pg. 2), in its comments about the entire U.S. conformity assessment system: "increasingly complex, costly, and burdensome to national welfare. Unnecessary duplication and complexity at the federal, state, and local levels result in high costs for U.S. manufacturers, procurement agencies, testing laboratories, product certifiers, and consumers."

In its Recommendation #1, the NRC study has suggested a valid direction out of the current morass. ACIL agrees that a body such as NCASR, whose mission is to recognize the work of accreditors, would be a constructive addition to the U.S. conformity assessment scene. Such a body would be the coordinator that is badly needed. And it would be the means for helping all accreditors to align themselves with the appropriate international standards. Once there is a common standard and a common recognition entity, there would be the basis for reciprocity among accreditors (thus, reducing costly duplication) and international acceptance of U.S. accreditations.

Admittedly, a literal implementation of the report's first recommendation may be impractical. However, the spirit and the direction of the recommendation are what matter. The exact nature and structure - and the name itself, for that matter - of this national recognition body are significantly less important than its mission and its effectiveness. Whatever it is ultimately called and however it is constructed, it must accomplish two purposes: creation of an organized and efficient domestic accreditation system; and international acceptance of U.S.-generated test data.

ACIL commends the NRC and the U.S. Congress for the production of this study of a vitally important subject. We support the report's findings, in particular its first recommendation. Finally, we urge the Congress to do what it can to ensure that this recommendation will be further developed and implemented.

Thank you for this opportunity to testify.

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